

1-1-1990

## Business Outlook, Vol. 6, No. 2, Winter 1990

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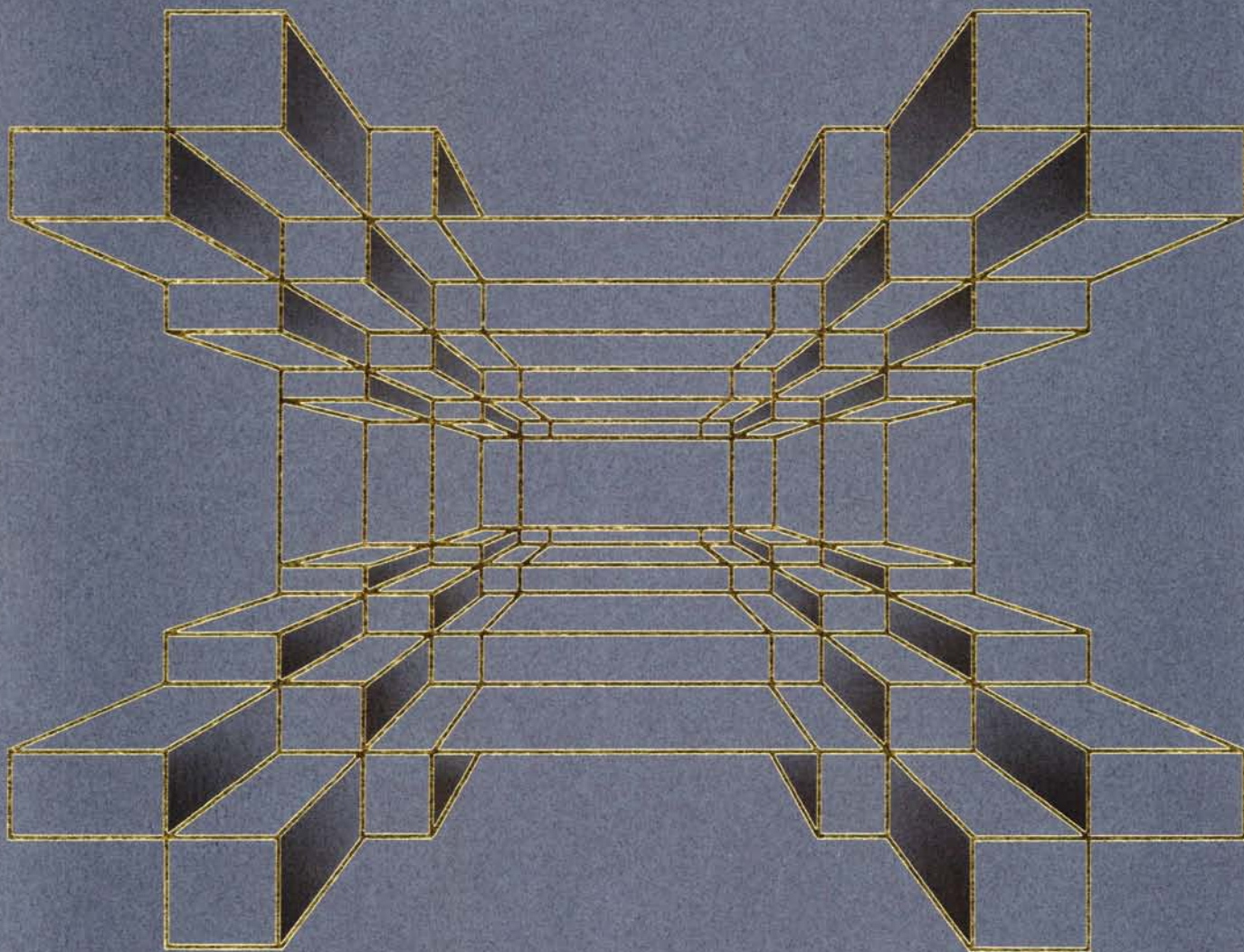
W.E. Upjohn Institute. 1990. Business Outlook for West Michigan 6(2).  
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# BUSINESS OUTLOOK

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## FOR WEST MICHIGAN



### **Forecast:**

- West Michigan at the Crossroads

### **Feature Article:**

- The 1990 and 1991 Economic Outlook for West Michigan



**W. E. UPJOHN INSTITUTE  
for Employment Research**

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*BUSINESS OUTLOOK for West Michigan* is published four times a year by the W. E. Upjohn Institute for Employment Research. The Institute, a nonprofit research organization, is an activity of the W. E. Upjohn Unemployment Trustee Corporation, which was formed in 1932 for the purpose of carrying on "research into the causes and effects of unemployment and measures for the alleviation of unemployment."

ISSN 0748-4216





# **BUSINESS OUTLOOK FOR WEST MICHIGAN**

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*Volume VI, Number 2, Winter 1990*

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We gratefully acknowledge the following businesses  
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## **Contents**

<b>Business Outlook Discussion Paper</b>	
The 1990 and 1991 Economic Outlook for West Michigan .....	1
<b>Business Outlook for West Michigan</b>	
West Michigan at the Crossroads .....	6
<b>Business Outlook for the Battle Creek MSA .....</b>	<b>12</b>
<b>Business Outlook for the Benton Harbor MSA .....</b>	<b>14</b>
<b>Business Outlook for the Grand Rapids MSA .....</b>	<b>16</b>
<b>Business Outlook for the Kalamazoo MSA .....</b>	<b>18</b>
<b>Business Outlook for the Muskegon MSA .....</b>	<b>20</b>
<b>Appendix Tables</b>	
• Index of Help-Wanted Advertising .....	22
• Index of Leading Indicators .....	22
• Components of the Index of Leading Indicators .....	23
• Employment Data for West Michigan MSAs and Michigan .....	24
• Vacancy Rates for Selected Metropolitan Statistical Areas (MSAs) in Michigan .....	25
• Population by Sex and Age: Michigan and Five Metro Areas in West Michigan .....	25
• Average Residential Contract Mortgage Rates in Michigan .....	26
• Consumer Price Index .....	26
• Selected Labor Market Indicators .....	27
• Commercial Banking Data .....	27
• Population and Income Update for Selected Areas .....	28



I want to sincerely thank all our readers who took the time to respond to our READER'S SURVEY. It was, of course, gratifying to receive the words of support that were offered, but more useful were the many excellent suggestions and comments.

While I cannot address all suggestions individually, I want to mention the current efforts we are making in response to many of your comments and suggestions.

1. We are in the process of collecting building permit data broken out by residential, commercial, and industrial activity for each of the metropolitan areas. In order to seasonally adjust this new data base, we must enter at least six years of monthly data into the computer, so please be patient.

2. We are now receiving, from the state and local Board of Realtors, monthly reports on the average sales price of homes for each of the metropolitan areas. This new data series will be included in the upcoming *Business Outlook*.

3. We recently received the 1988 population and 1987 per capita income estimates by local governmental units from the State's Office of Management and the Budget. Accordingly, Table A-11 in this report has been updated. If you want a copy of the new estimates for the local governments in your metropolitan area, simply drop us a note or call (616-343-5541).

4. We will work on developing an index of electrical usage for each of the areas and hope to include it in our Fall issue of *Business Outlook*.

5. We agree that information on local retail and cost-of-living trends would be welcomed, but at this time, the cost of the necessary data collection is prohibitive.

6. We will look into the possibility of disaggregating our quarterly employment figures into durable and nondurable manufacturing, retail and wholesale trade, and services.

Again, thank you for your comments and suggestions. Your input is invaluable in guiding us in our efforts to print accurate, useful, and timely economic information for the West Michigan Business Community.

By the way, don't be shy in mentioning *Business Outlook* to your friends and colleagues.

George Erickcek

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# The BUSINESS OUTLOOK

## DISCUSSION PAPER

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### The 1990 and 1991 Economic Outlook for West Michigan

George A. Erickcek

*Forecasting is like trying to drive a car blindfolded and following directions given by a person who is looking out the back window.*

Anonymous

This marks the first time that *Business Outlook* will venture both a one- and two-year forecast of economic growth for West Michigan.<sup>1</sup> Most forecasters agree that the nation will avoid a recession in 1990; however, here in West Michigan we may face a rougher road. Even with a rather optimistic forecast for the nation, we predict that West Michigan will experience a slight reduction in manufacturing employment in 1990, along with a decline in the rate of employment growth in its nonmanufacturing sector.

We embark on this journey with not so much a desire to accurately foretell West Michigan's future, although this would be most rewarding, but with more of a hope that we can shed light on the linkages between West Michigan and the ever-changing national economy. West Michigan is one of the more dynamic manufacturing centers of the nation; as such, its performance depends greatly upon the health and direction of the national economy.

In the first section of this report we discuss the national outlook, identifying the key predictions contained within it that will have the greatest impact on the West Michigan economy. The West Michigan forecast is generated by the Institute's regional forecasting model, which incorporates the University of Michigan's Research Seminar in Quantitative Economics' (RSQE) 1990 and 1991 national forecast. In the second section, we briefly examine the industrial structure of the West Michigan economy and discuss how it affects our growth relative to the nation's. In the third section, we present our forecast for the metropolitan areas of West Michigan.

This forecast introduces just one of the many applications of the Institute's regional economic model. The model is more than a forecasting tool. It provides economic information never before available for West Michigan. Its real forte is estimating the total economic impact of changes in the local economy, such as plant closings or openings, changing pro-

duction costs, tourist development, or countless other events that can have major impacts on the economic livelihood of area residents. In the final section of this report I briefly highlight some of the other uses of the model.

#### The RSQE National Forecast

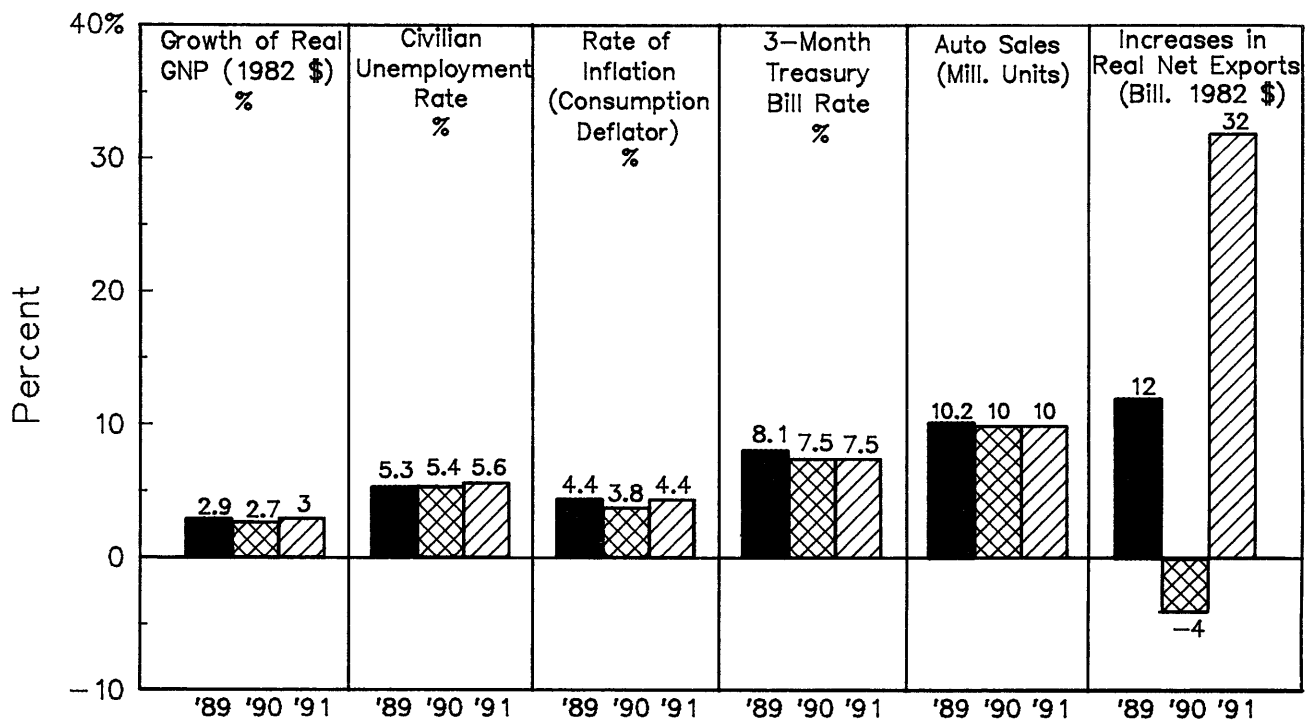
Every November the University of Michigan's Research Seminar in Quantitative Economics (RSQE) releases its national economic forecast for the coming two years. RSQE has an excellent record in tracking the national economy, winning the coveted Silbert Award for forecasting the last two times it was eligible. RSQE was on the mark in predicting the slowdown in GNP growth during the last quarter of 1989. According to revised governmental estimates, the GNP grew at a sluggish 0.9 percent annual rate in the fourth quarter; RSQE predicted back in November that it would inch along at a 0.7 percent annual rate.

RSQE predicts the current economic expansion will continue through 1991, although some slowing will occur in 1990. Chart 1 presents the key elements of the RSQE forecast. After growing 3.0 percent in 1989, real GNP is expected to grow by just 2.7 percent in 1990, and then rebound to 3.0 percent in 1991. The slowdown in GNP growth in 1990 will be enough to cause the national unemployment rate to rise slightly to an annual average rate of 5.4 percent. The nation's unemployment rate is expected to continue its ascent in 1991, reaching an annual average rate of 5.6 percent.

Inflation is expected to decline to 3.8 percent in 1990, due to both a slowing economy and an expected decline in the international price of oil. With inflation stable and the economy growing, RSQE sees little change in the monetary policies of the Fed, predicting that 3-month treasury bill rates will remain stable for 1990 and 1991.

Of key relevance to West Michigan's economy is RSQE's forecast for auto production, exports, and business investment. In car sales, RSQE is relatively bullish, predicting that car sales will be stable at 10 million units in both 1990 and 1991. This is down slightly from the estimated 10.2 million units sold in 1989. Many have doubts that the auto industry

**Chart 1**  
**University of Michigan's Research Seminar in Quantitative Economics**  
**United States Economic Forecast for 1990-91**



will be able to reach these sales volumes, especially in 1990. In addition to much publicized layoffs at the Big Three auto producers, both Mazda and Mitsubishi Motors announced production cutbacks at their U.S. facilities in January. With its expansive network of auto suppliers, the West Michigan economy will be seriously affected if auto production stalls.<sup>2</sup>

The RSQE forecast predicts a slight deterioration in real net exports in 1990, due to the lagged effect of the dollar appreciating in the first half of 1989. The forecast shows an extremely strong year for exports in 1991.

Finally, RSQE predicts that nonresidential investment spending will be down in 1990. From an estimated 3.5 percent increase in 1989, nonresidential investment is predicted to grow by only 2.6 percent in 1990. Nonresidential construction is expected to be flat and producers durables expenditures are predicted to increase by 3.9 percent in 1990. In 1989, nonresidential construction declined by 1.7 percent, while producer durables expenditures rose 5.2 percent. The predicted slowdown in durable goods expenditures in 1990 will impact West Michigan by decreasing sales of capital goods produced in the region. Just as important, it warns of a possible decline in international competitiveness, as fewer manufacturers upgrade and modernize their plants.

RSQE currently stands alone among nationally known forecasting groups in its more bullish predictions, especially for 1990. In its January 2 issue, the *Wall Street Journal* polled 40 nationally respected economists, and it was

their consensus that the nation's GNP will grow at only a 1.3 percent annual rate in the first half of 1990 and at a 2.0 percent annual rate in the second half. This is substantially below RSQE's forecast. If RSQE is overly optimistic about the economy's performance in 1990, it is probably in its prediction of auto sales and investment in producer durables. The nagging federal deficit, inflationary pressures both here and abroad, and the nation's poor savings rate may push interest rates up, causing businesses to cut back or cancel expansion or modernization plans and consumers to stay away from car showrooms. If this occurs, the start of the 1990s could be an unwanted repeat performance of the early 80s in West Michigan.

### The West Michigan Economy

#### *Importance of Manufacturing*

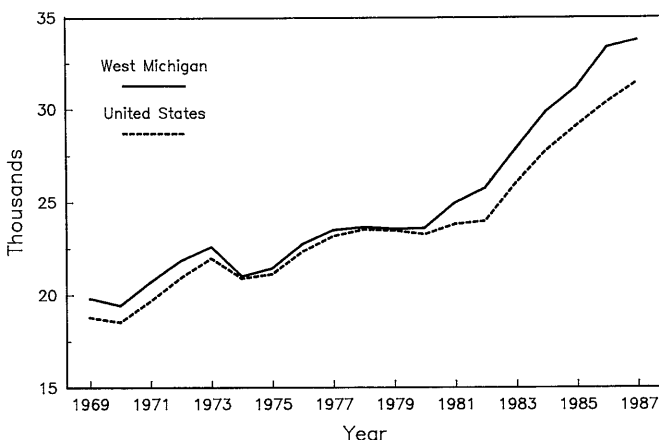
The makeup of the West Michigan economy is strikingly different from that of the nation as a whole. While its total employment accounts for a little under 0.6 percent of the nation's, its manufacturing base employs nearly 1.0 percent of the nation's manufacturing employment. Approximately 30 percent of West Michigan's total employment is in manufacturing, compared to 18 percent for the nation.

In terms of output or, more accurately, value added in production, the importance of manufacturing in West Michigan is even more pronounced.<sup>3</sup> Due to productivity improvements and manufacturers' practice of subcontracting many activities

to service firms, output, not employment, is the best measure of the size of the region's manufacturing base. With our regional model, we can estimate both the size and composition of the region's total value added. As shown in Chart 2, manufacturing accounted for nearly 28 percent of total employment in 1987, but generated nearly 45 percent of the region's total value added. In spite of an expected decline in its share of total employment, manufacturing should maintain its share of total value added produced in the region in the 1990s. In 1987, services employed nearly the same number of workers as manufacturing, but only accounted for 15.8 percent of the region's value added. Nationwide, manufacturing produced 28 percent of total value added, while employing just 18 percent of the nation's workforce in 1987.

Given manufacturing's strong role in the West Michigan economy, the next question is, of course, how healthy is it? Here, the news is good. Our research indicates that in the 80s, West Michigan's manufacturing sector, on average, captured market share in terms of employment growth from its national competitors. Not all manufacturing sectors gained; in fact, nonelectrical machinery and electrical equipment lost share. However, furniture, fabricated metals, transportation equipment, chemicals and plastics all gained. In part, this is because of the region's manufacturing workforce being very productive. As shown in Chart 3, West Michigan's manufacturing base has outperformed the U.S. in real productivity growth since 1980. In 1980, value added per worker in West Michigan matched the U.S. average. By 1987, however, value added per worker in West Michigan was approximately 10 percent greater than the U.S. average.

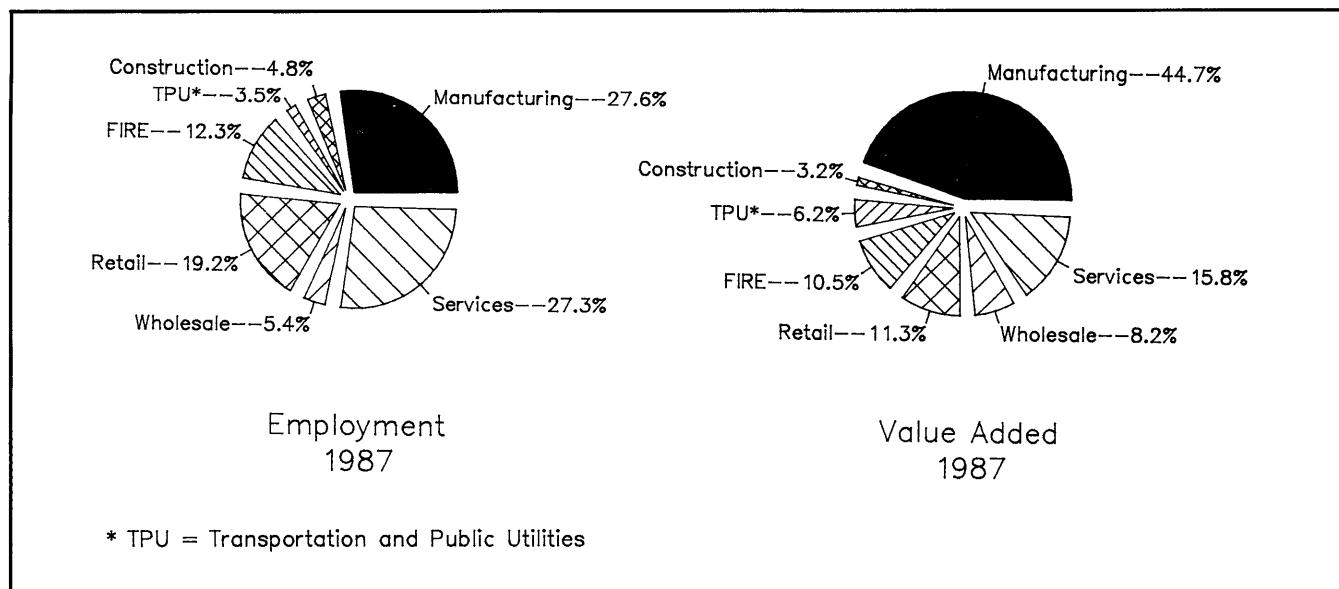
**Chart 3**  
**Relative Productivity in Manufacturing**  
(value added per worker in 1977 dollars)  
**1969-1987**



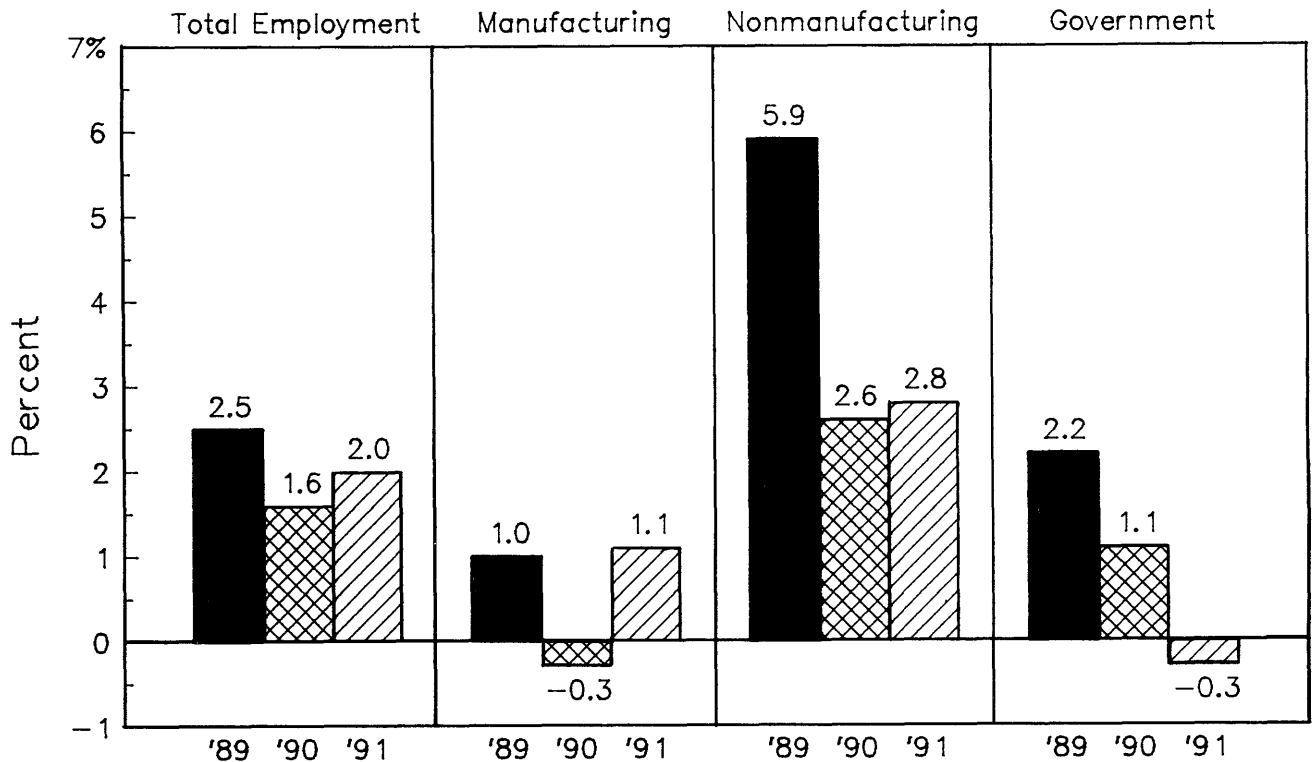
The future of West Michigan rests upon its manufacturing sector's ability to stay competitive in times of declining manufacturing employment. In West Michigan and the nation, employment in manufacturing declined during the 1980s; however, West Michigan's manufacturing sector was able to capture a larger piece of this shrinking pie. Employment in manufacturing in West Michigan fell by over 10,700 jobs between 1979 and 1987; but the region's manufacturing sector would have lost over 20,000 jobs if its industries' performance had followed national trends.

At best, West Michigan's manufacturing sector will be able to maintain its current level of employment during the next

**Chart 2**  
**West Michigan Private Sector Employment and Value Added**



**Chart 4**  
**W. E. Upjohn Forecast for West Michigan Employment Growth**



decade. Given the predicted slowdown in the national economy for this year, however, short-term employment reductions can be expected.

#### ***The 1990 and 1991 Economic Forecast for West Michigan***

Our 1990 and 1991 employment forecasts for West Michigan are presented in Chart 4. Overall, we foresee continued employment growth in the metropolitan areas of West Michigan through 1991, but employment growth in either year will not match its 1989 performance. In 1989, total employment rose 2.4 percent in West Michigan. In 1990, we see the region's employment growth slowing to 1.6 percent and then rebounding to 2.0 percent in 1991.

In manufacturing, we forecast a slight 0.3 percent decline in employment in 1990, with a strong recovery in 1991. RSQE predicts employment in the state's manufacturing sector to decline 0.7 percent in 1990. West Michigan's manufacturing industries that should be carefully watched for weakness are primary metals, paper and food products. In contrast to predicted declines in the manufacturing sector, we expect a modest expansion in employment growth in the region's diverse, nonelectrical machinery industry. In 1991, we see employment in manufacturing making a strong comeback due to the improved national economy.

In 1989, the region's nonmanufacturing sector recorded an impressive 3.9 percent increase in employment in West Michigan, compared to 1.9 percent nationwide. This outstanding performance is welcomed, as growth in the region's nonmanufacturing sector has been sluggish relative to the nation in recent years. Moreover, in spite of the economic slowdown predicted, the employment in West Michigan's nonmanufacturing sector is expected to outrace the U.S. average in 1990. Employment in the region's nonmanufacturing sector is expected to grow by 2.6 percent in 1990, and by 2.8 percent in 1991. Nationwide, nonmanufacturing employment is estimated to increase by 1.2 percent in 1990 and 2.6 percent in 1991.

The predicted lack in response of the region's nonmanufacturing sector to the predicted increase in manufacturing employment in 1991 is worth noting. There appears to be a lag effect between manufacturing and nonmanufacturing employment. First, this can be attributed to many of the recalled or newly-hired workers in manufacturing in 1991 being a bit cautious in their consumption expenditures. Second, business leaders will also be more prudent in their business plans and expenditures, reducing the demand for financial and other business services such as real estate, equipment leasing and other services associated with growth. Finally, the poor performance of 1990 will cause some individuals to move out of the region and other prospective residents to move elsewhere.



We predict a similar lag effect in government employment. In 1990, government employment will expand by a 1.1 percent rate. In 1991, we foresee local governments cutting back on employment due to decreasing revenues resulting from the slowdown in business activity in 1990. Employment in government is expected to decline by 0.3 percent in 1991.

The region's standard of living as measured by its real disposable income is expected to decline relative to the nation in 1990. In 1989, real disposable income grew an estimated 5.2 percent in the West Michigan metropolitan region, but is forecasted to grow by just 1.5 percent in 1990. The region's real disposable income is expected to recover in 1991 and grow 3.4 percent. In comparison, RSQE estimates that real disposable income in the nation will increase by 2.8 percent in 1990 and by an even lower 2.3 percent in 1991.

The above forecast is highly dependent upon the future performance of the national economy. With West Michigan's large manufacturing sector, an unexpected jump in interest rates, an unforeseen horrible year in the auto industry, or an unexpected rise in the value of the U.S. dollar and its negative impact on net exports will affect West Michigan more than the rest of the nation. We expect West Michigan to be one of the better performing economies in the multi-state Great Lakes region in the coming year. Nevertheless, because of its dependence on manufacturing, West Michigan will still be vulnerable to movements in the nation's struggling manufacturing sector.

### ***The REMI Model***

The Upjohn Institute's regional model (REMI) is both a forecasting and simulation model. It can estimate the future economic impact of changes in the West Michigan economy, ranging from plant openings or closings to tourist development to changes in labor or tax costs, as well as provide an economic forecast. The model is extremely flexible; it will accept any economic forecast of the U.S. economy and has over 900 policy variables that can be used in estimating the economic impact of almost any change in local business activity, business costs or governmental policies.

The model is calibrated for each of the five metropolitan areas in West Michigan and for the rural areas surrounding

the metropolitan areas.<sup>4</sup> The model identifies the inter-industry linkages and estimates the direct, indirect and induced effects of a policy or business activity. In addition, the model estimates business costs of labor, capital, and fuel for each of the metropolitan areas. Moreover, it estimates the linkages between the metropolitan areas. For example, it is capable of estimating the impact of a major plant opening in Grand Rapids not only on the metropolitan area of Grand Rapids, but also on Kalamazoo and Muskegon Counties.

The model forecasts employment, business costs, and output trends for 53 industries and provides a forecast for 94 occupations in each of the metropolitan areas of West Michigan.

If you are interested in finding out more about the REMI model and its possible applications, please call George Erickcek.

### **NOTES**

1. Throughout the article, West Michigan is defined as the metropolitan areas of Battle Creek, Benton Harbor, Grand Rapids, Kalamazoo, and Muskegon.
2. According to our regional model, West Michigan would lose approximately 23,000 jobs if the state's auto industry suffered a one-third reduction in employment. All the job losses in the auto industry were assumed to occur outside West Michigan; hence, all the job losses in West Michigan were associated with the resulting decline in sales of the region's auto suppliers.
3. Output is the dollar value of goods and services produced in the region. Since much of the material used in producing these goods and services is shipped into the region, however, output is not a good measure of the level of industrial activity in the area. Value added, on the other hand, measures only that part of the total value of the products or services which can be contributed to the region. In other words, value added equals total output minus the cost of all material and services imported from outside the region.
4. The following are the boundaries of the regions for the model:

Battle Creek:	Calhoun County
Benton Harbor:	Berrien County
Grand Rapids:	Kent and Ottawa Counties
Kalamazoo:	Kalamazoo County
Muskegon:	Muskegon County
Rural West Michigan:	Allegan, Barry, Branch, Cass, St. Joseph, Van Buren Counties
Rest of Michigan	

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# The BUSINESS OUTLOOK for WEST MICHIGAN

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## West Michigan at the Crossroads

George A. Erickcek

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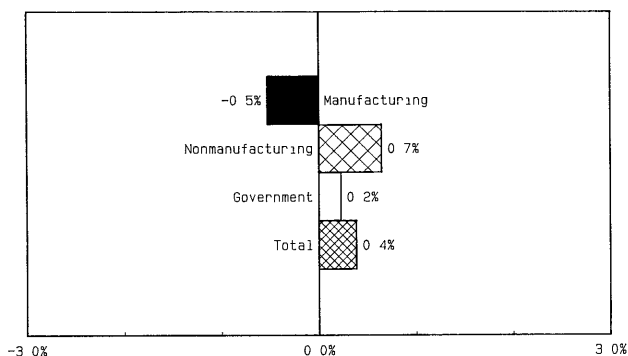
Total employment rose 0.3 percent in the five metropolitan areas of West Michigan during the final quarter of 1989, and is expected to rise only minimally in the coming months. The region is already responding to the current slowdown in the state's auto industry, through temporary layoffs and cutbacks in hours worked. The ability of the region's manufacturing sector to develop stronger, non-auto markets during this period of sluggish national growth will determine the business outlook for West Michigan in the coming year.

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### *The National Setting*

The Gross National Product (GNP) inched along at a 0.9 percent annual rate in the final quarter of 1989, down from its robust, third-quarter annual rate of 3.0 percent. The quarter's rate of growth was the smallest in 3.5 years. Final sales (GNP minus changes in inventories) rose at a meager 0.5 percent annual rate in the fourth quarter. Immediate blame can be placed on consumers; however, a deeper concern is the national slowdown in the growth of nonresidential investment.

**Chart 1**  
**United States Employment**  
**Percentage Change, Fourth Quarter 1989**



SOURCE: Based on U.S. Department of Labor data.

Consumer spending rose slightly at a 0.4 percent annual rate in the fourth quarter of 1989.<sup>1</sup> In the third quarter, personal consumption expenditures had grown at a strong 5.6 percent annual rate. Although consumption expenditures on services rose at a 5.6 percent annual rate in the fourth quarter,

it was not enough to counter the quarter's dramatic decline in consumer purchases of durable goods, which dropped at a 14.2 percent annual rate. Final auto sales to consumers, which account for 40 percent of consumer durable goods purchases, plummeted at a 39.1 percent annual rate in the quarter. As a result, auto inventories increased 6.2 percent in the fourth quarter, despite major cutbacks in production by the Big Three.

The Big Three suffered significant reductions in profits during the fourth quarter. General Motor's profits fell 50 percent from a year ago, while Ford's profits dropped an even greater 73 percent from fourth quarter's levels of a year ago. Chrysler posted a net loss of \$644 million in the fourth quarter, due to a one-time charge associated with the closing of assembly plants in Detroit and St. Louis.

Reasons for many consumers staying home in the fourth quarter included a decline in consumer confidence, a slowdown in the growth of disposable personal income, and the absence of rebates on the nation's car lots. In January, the Conference Board's Index of Consumer Confidence fell to its lowest level in more than two years. Nationwide, growth in disposable personal income slowed to a 2.7 percent annual rate in the fourth quarter, down from its 4.4 percent annual rate in the third quarter.

The auto industry introduced a new round of rebates in January 1990, which induced increased activity in the showrooms. Sales were up 3.4 percent in January. In the first ten days in February, auto and truck sales were up 8.2 percent from the same period last year.

Business investment fell sharply in the fourth quarter of 1989, raising concerns about the long-term competitive position of the nation's manufacturing base. Nonresidential

**Table 1**  
**Michigan (Statewide) Statistics**  
(Adjusted for seasonal variations)

Measure	1989 fourth quarter	1989 third quarter	Percent change third to fourth	1988 fourth quarter	Percent change fourth to fourth
Employment:					
Manufacturing .....	927,180	943,950	-1.8	944,930	-1.9
Nonmanufacturing .....	2,306,760	2,296,310	0.5	2,230,330	3.4
Government .....	636,250	628,440	1.2	631,950	0.7
Total .....	3,870,190	3,868,700	0.0	3,807,210	1.7
Unemployment:					
Number unemployed .....	350,100	338,760	3.3	324,680	7.8
Unemployment rate .....	7.4	7.2	0.2	7.0	0.4
State indexes:					
Help-wanted ads:					
Detroit .....	161	162	-0.6	186	-13.4
West Michigan (5 MSAs) .....	269	279	-3.6	295	-8.8
Leading indicators (statewide) .....	138	137	0.7	154	-10.4
State components:					
Average weekly hours .....	42.5	42.8	-0.7	43.8	-3.0
UI initial claims .....	18,748	19,138	-2.0	15,298	22.6
New dwelling units <sup>a</sup> .....	44,847	42,332	5.9	46,868	-4.3

SOURCES: W. E. Upjohn Institute for Employment Research. Based on dwelling data from F. W. Dodge Division, McGraw Hill Information Systems Company, help-wanted index from The Conference Board and employment data from Michigan Employment Security Commission. National components in Table A-3.

a. New dwelling unit data are seasonally adjusted annual rates.

**Table 2**  
**West Michigan (5 MSAs) Statistics**  
(Adjusted for seasonal variations)

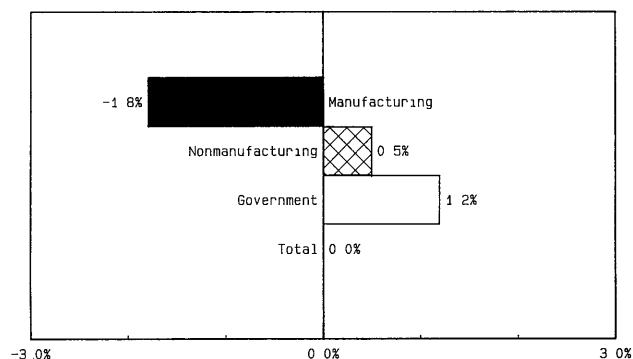
Measure	1989 fourth quarter	1989 third quarter	Percent change third to fourth	1988 fourth quarter	Percent change fourth to fourth
Employment:					
Manufacturing .....	182,240	183,900	-0.9	183,870	-0.9
Nonmanufacturing .....	375,700	373,100	0.7	358,730	4.7
Government .....	80,690	79,550	1.4	79,920	1.0
Total .....	638,630	636,550	0.3	622,520	2.6
Unemployment:					
Number unemployed .....	45,620	44,130	3.4	40,330	13.1
Unemployment rate .....	6.3	6.3	0.0	5.7	0.6
Local indexes:					
Help-wanted ads .....	269	279	-3.6	295	-8.8
Leading indicators .....	133	133	0.0	146	-8.9
Local components:					
Average weekly hours .....	41.3	41.4	-0.2	41.9	-1.4
UI initial claims .....	2,496	2,613	-4.5	2,084	19.8
New dwelling units <sup>a</sup> .....	7,589	8,052	-5.7	7,841	-3.2

SOURCES: W. E. Upjohn Institute for Employment Research. Based on dwelling data from F. W. Dodge Division, McGraw Hill Information Systems Company, ad counts from five daily newspapers and employment data from Michigan Employment Security Commission. National components in Table A-3.

a. New dwelling unit data are seasonally adjusted annual rates.

investment declined at an annualized rate of 6.4 percent in the fourth quarter. Expenditures on producer durables, a consistently strong component of the current expansion, fell sharply at an annual rate of 8.4 percent in the quarter. In the third quarter, it had risen at a 4.6 percent annualized rate. Expenditures on nonresidential structures was completely flat in the fourth quarter, after growing a strong 8.0 percent in the previous quarter.

**Chart 2**  
**Michigan Employment**  
**Percentage Change, Fourth Quarter 1989**



SOURCES: Based on U.S. Department of Labor and Michigan Employment Security Commission data.

Residential investment fell at an annual rate of 0.6 percent. In the third quarter, residential investment plunged at a 9.2 percent annualized rate, and for all of 1989, it declined 2.7 percent. In January 1990, housing starts jumped a record 29.6 percent over December's figures, due in part to unseasonably mild weather conditions.

The nation's trade gap improved in the fourth quarter of 1989. The nation's exports of goods and services rose at a 8.6 percent annual rate, while imports increased at a slower 2.0 percent annual rate in the quarter. A further breakdown of the nation's exports shows that merchandise exports rose at a 9.5 percent annual rate, despite an annualized 10.1 percent drop in capital goods exports in the fourth quarter. Services exports grew at a 6.5 percent annual rate.

Merchandise imports rose at a 9.5 percent annual rate in the fourth quarter, with the value of capital goods imports soaring at a 19.9 percent annual rate.

The increased flow of imported capital goods, at the same time that both the nation's export of capital goods and overall investment in producers durables are in decline, is a worrisome sign. Currently, the nation's manufacturers are faced with two major obstacles: sluggish productivity growth and uncertainty about interest rates. Output per worker rose a

meager 0.2 percent in the fourth quarter, slowing the rate for all of 1989 to a disappointing 0.9 percent, the smallest annual gain since 1983. With continued growth in wages and salaries and little productivity improvement, unit labor costs rose 4.6 percent in 1989, compared to just 2.7 percent in 1988. In the fourth of 1989, unit labor costs leaped at an annual rate of 6.7 percent.

In early January, most banks cut their prime rate from 10.5 to 10 percent in response to the Fed's earlier moves to lower short-term rates. However, inflationary pressures both here and abroad have caused long-term rates to increase recently. Producer prices jumped a sharp 1.8 percent in January, and consumer prices climbed 1.1 percent. Much of the increase in these two indexes was expected as a result of the unseasonably cold December; however, January's core inflation rate, which excludes highly volatile energy and food prices, increased 0.6 percent or at a 7.4 percent annual rate. Faced with rising inflation and unit labor costs and the federal government's continuous need to borrow from abroad, the Fed will find it increasingly difficult to lower interest rates to stimulate the economy.

Although there is a general agreement that the national economy will continue to grow in 1990, albeit at a slower rate, there remains an air of uncertainty. The February *Blue Chip Economic Indicators*' consensus forecast calls for GNP to grow just 1.6 percent in 1990, far below the University of Michigan's 2.7 percent predicted growth rate released in November 1989 (See Discussion Paper). The national Index of Leading Indicators, however, jumped up 0.8 percent in December, suggesting increased strength in the national economy. The air of uncertainty is best reflected by the conflicting indicators recently released by the Columbia University's Center of International Business Cycle Research (CIBCR). The Center's Leading Employment Index has already signaled a recession. The Index has predicted 10 of the last 8 recessions (there were false starts in 1956 and 1966). However, the Center's Long Leading Index keeps rising, suggesting that a recession is not foreseen, at all, for 1990.

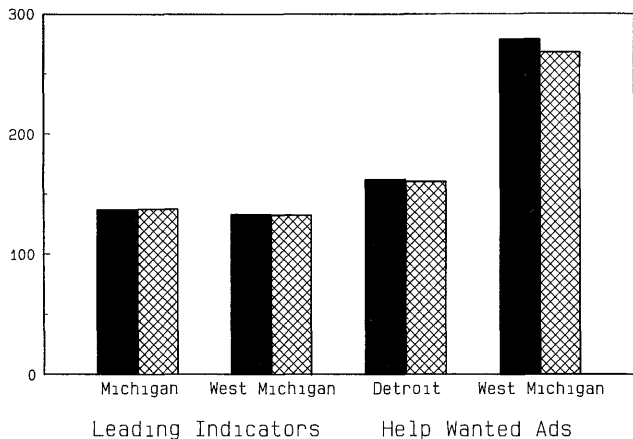
### ***The State of Michigan***

Statewide, total employment did not change in the fourth quarter of 1989, after growing a meager 0.2 percent in the third quarter. Little improvement is foreseen in the state's employment situation in the coming months.

Hit by both labor-management disputes and temporary layoffs in the auto industry, employment in the state's manufacturing sector plunged 1.8 percent in the fourth quarter, after declining by a smaller 0.4 percent in the third quarter. Employment in nonmanufacturing grew 0.5 percent in the fourth quarter, on top of a 0.8 percent increase in the

previous quarter. Finally, governmental employment jumped 1.2 percent in the quarter, offsetting its 1.0 percent decline in the third quarter.

**Chart 3**  
**Michigan and West Michigan Indexes**  
**Third Quarter 1989 and Fourth Quarter 1989**  
 (1982 = 100)



In comparison to the nation, the state performed poorly in terms of employment growth in the fourth quarter. Nationwide, employment in manufacturing fell just 0.5 percent, while employment in nonmanufacturing grew 0.7 percent.

It is not surprising that without any employment growth, the state's unemployment rate rose from 7.2 percent in the third quarter of 1989 to 7.4 percent in the fourth quarter. The number of individuals unemployed increased 3.3 percent in the fourth quarter.

The state's Index of Leading Indicators rose 0.7 percent in the fourth quarter, suggesting that in spite of the state's sagging auto industry, employment declines in the state's manufacturing sector may be leveling off. The state's components of the Index were mixed. The number of initial claims for unemployment insurance declined 2.0 percent in the fourth quarter, after jumping 16.2 percent in the third quarter. The number of new dwelling units put under contract also improved, rising 5.9 percent in the fourth quarter, after falling 2.4 percent in the previous quarter. On the downside, average weekly hours of production workers fell 0.7 percent, exactly matching its decline in the previous quarter.

The Detroit Help-Wanted Advertising Index declined 0.6 percent in the fourth quarter, after falling 4.7 percent in the third quarter. Since this Index tracks the growth in job openings primarily in nonmanufacturing, we foresee continued sluggish employment growth in the state's nonmanufacturing sector.

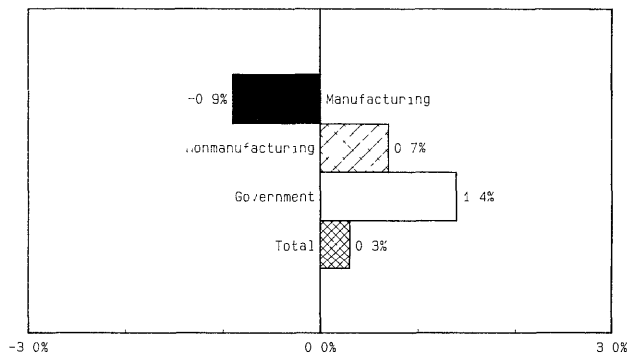
As mentioned in the national setting, the closing months of 1989 were very harsh on the state's auto industry. Moreover, the changing ownership and geographical location of the industry is of deep concern to the state. The Japanese, in some instances in cooperation with the Big Three, have built eight auto assembly plants in the United States during the 1980s, matching the number of plants the Big Three have closed in the past three years. Of these transplant facilities, only Mazda has located in Michigan.

### *Outlook for West Michigan*

Total employment grew 0.3 percent in the fourth quarter of 1989 in the five metropolitan areas of West Michigan. We expect employment growth to remain sluggish in the coming months, due to both a slowdown in employment growth in the region's nonmanufacturing sectors and very modest declines in manufacturing employment.

Employment in the region's manufacturing sector fell 0.9 percent in the final quarter of 1989, on top of a 0.3 percent decline in the previous quarter. Employment in nonmanufacturing rose 0.7 percent, after growing 1.1 percent increase in the previous quarter. Finally, government employment jumped 1.4 percent in the fourth quarter, more than offsetting its 0.8 percent third-quarter decline.

**Chart 4**  
**West Michigan Employment**  
**Percentage Change, Fourth Quarter 1989**



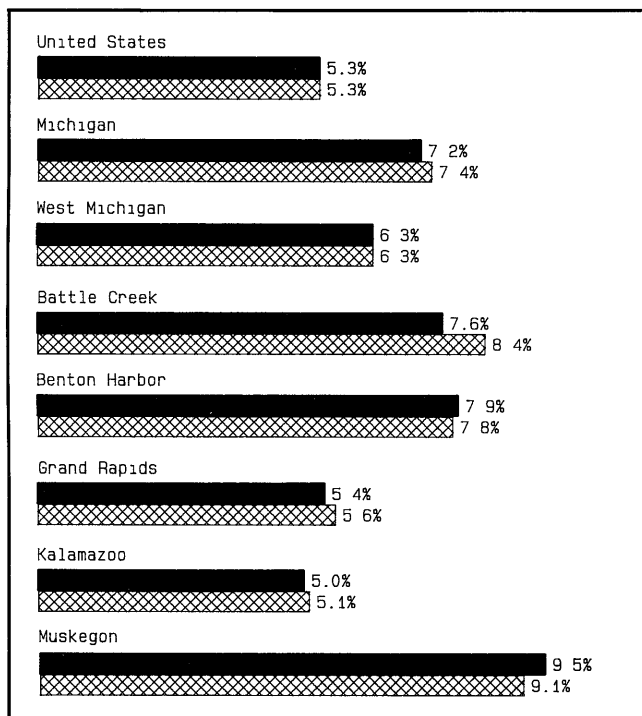
SOURCE: Based on Michigan Employment Security Commission data for 5 MSAs in West Michigan.

The region's unemployment rate remained unchanged at 6.3 percent in the fourth quarter, although the number of individuals unemployed rose 3.4 percent. During the quarter, employment measured by place of residence grew at a faster rate than did wage and salary employment recorded at the place of work. This could be explained by an increase in the number of metropolitan residents working in nonmetropolitan



The region's composite Index of Help-Wanted Advertising fell 3.6 percent in the fourth quarter, after dropping 2.8 percent in the previous quarter. The continued decline in this Index suggests a slowing in the region's nonmanufacturing sectors.

**Chart 5**  
**Unemployment Rates**  
**Third Quarter 1989 and Fourth Quarter 1989**



The region's Index of Leading Indicators did not move in the fourth quarter, after declining for four straight quarters. Although it is much too early to claim that manufacturing has "bottomed out," it is a sign in the right direction. The local components of the Index were mixed in the quarter. Initial claims for unemployment insurance fell 4.5 percent in the fourth quarter after climbing 14.2 percent in the previous quarter. On the other hand, average weekly hours worked by production workers fell 0.2 percent, matching its

decline in the previous quarter, and the number of new dwelling units put under contract declined 5.7 percent in the fourth quarter, after falling 3.9 percent in the third quarter.

Although there are no auto assembly plants in West Michigan, the slowdown in the auto industry is having its impact on the region. Temporary layoffs have occurred at Donnelly Corporation in Holland, Ausco in Berrien County, and at the General Motors stamping plants in Kalamazoo and Grand Rapids. At other auto suppliers, such as Bendix Automotive Systems in the Benton Harbor MSA, overtime hours are being cut back. A major problem in West Michigan is that few of the area's auto suppliers are making headway in hammering out contracts with the Japanese transplant assembly plants, with the notable exceptions of Keeler Brass in Grand Rapids and Donnelly in Holland.

The changing structure of the area's office furniture industry may also have a short-term, negative employment impact. Haworth has reached an agreement to buy Mueller Furniture (200 employees), the Grand Rapids high quality wood office furniture manufacturer, and Herman Miller has announced plans to buy Meridian Incorporated (410 employees), the Spring Lake metal file manufacturer. No employment cutbacks have been announced with the above two mergers; however, Westinghouse has laid off 160 workers at the Shaw-Walker Furniture Company facilities in Muskegon, which it purchased in November 1989. A small number of layoffs are only to be expected in mergers due to the resulting duplication in overhead employment.

Increased merger activity is a sign of a maturing industry, as firms attempt to broaden their product lines and/or decrease their competition in a sluggish market environment. A more long-term question is whether future earnings will continue to be returned to the maturing furniture industry, or will firms begin to invest in other activities outside of furniture?

#### NOTE

1. Consumer expenditures, as well as all GNP statistics included in this report, are seasonally adjusted.

## Definitions of terms as used in this quarterly

**Business Cycle Turning Dates:** The historical business cycle turning dates used in this report are those designated by the National Bureau of Economic Research, Inc. (NBER). They mark the approximate dates when, according to NBER, aggregate economic activity reached its cyclical high (peak) or low (trough) levels.

**Central City:** An incorporated city or urbanized area defined by the U.S. Office of Management and Budget as having the largest population in the metropolitan statistical area in 1980. For an additional city to be included in the name of an MSA, the employment/residence ratio must be at least 0.75, with out-commuting of less than 60 percent of that city's resident employed workers.

**Employment:** In this quarterly, "employment" is used instead of the more precise term, "wage and salary employment." The MESC employment data shown refer to "jobs by place of work," or nonagricultural employment.

**Manufacturing:** The estimate of the number of workers on the payrolls of privately owned firms engaged in the production of durable or nondurable goods.

**Nonmanufacturing:** The estimate of the number of workers on the payrolls of privately owned firms that provide services rather than goods. (Construction and mining are included.)

**Government:** The estimate of the number of workers on national, state, or local governmental payrolls.

**Historical data:** Monthly, quarterly, or yearly information for past periods. (Shown in appendix tables.)

**Index of Leading Indicators, State & MSAs:** A (composite) index with seven components (see Tables A-2 and A-3).

**Index of Leading Indicators, United States:** A (composite) index based on 11 major components made up of 60 series. Marginal employment adjustment measures include average weekly hours in manufacturing employment and average weekly initial UI claims. One of the two job vacancy series is Help-Wanted Advertising. New private housing units are part of the fixed capital investment component. For a complete list see *Business Conditions Digest* and the 1984 *Handbook of Cyclical Indicators*, The U.S. Department of Commerce, Bureau of Economic Analysis.

**Initial Claims:** A count of the number of new claims filed for unemployment insurance (UI) for regular state programs. Each initial claim filed indicates a new spell of unemployment for an experienced worker. In Michigan, to be eligible for benefits, an individual must have earned wages of at least 30 times the state minimum hourly wage (currently \$3.35) during not less than 20 of the 52 consecutive calendar weeks preceding the benefit year. Each such week is

termed a "credit week." An individual may qualify with as few as 14 credit weeks, however, if base period wages have been in excess of 20 times the state average weekly wage (currently \$433.91).

**Michigan Employment Security Commission (MESC):** Michigan Employment Security Commission is a state agency that administers the Job Service and the state/federal unemployment insurance programs and provides labor market information in keeping with state and federal reporting requirements.

**MSA (1983 definition):** In all but New England, one or more counties are defined as a Metropolitan Statistical Area if they contain the following: a large population nucleus (a central city or "urbanized" area) with adjacent communities which have a high degree of economic and social integration. Adjacent counties are included if they have 60 persons per square mile, and/or substantial 1970 to 1980 population growth (20 percent) with 10 percent residing within the urbanized area and a commuting pattern with 15-20 percent of residents working within the central city or urbanized area.

MSAs are also defined as **major labor market areas** by the Michigan Employment Security Commission (MESC). Those labor market areas outside of the MSAs have the peninsula or county name.

**National Purchasing Management Selected Components Indexed:** The national association conducts a monthly survey of purchasing managers from a scientifically selected sample of firms across the nation. Responses indicate only the direction of change; the percentage reporting favorable changes minus those with unfavorable changes plus 100 equals the index as shown in this quarterly. For those familiar with diffusion indexes, these indexes represent two times the percentage reporting a change in a favorable direction, e.g., more new orders. (The favorable count includes one-half of those reporting no change.)

**Time Series:** A set of numbers covering a known interval or timespan (e.g., months or quarters) that provide information about a well-defined activity, process or group. For local series that consistently change direction in advance of overall economic activity, see Table A-3. Those measuring current or past economic activity are found in Table A-4.

**Unemployed:** The number of persons in the labor force who are without a job or on layoff but not expecting to be called back. In order to be counted, an individual must be seeking work.

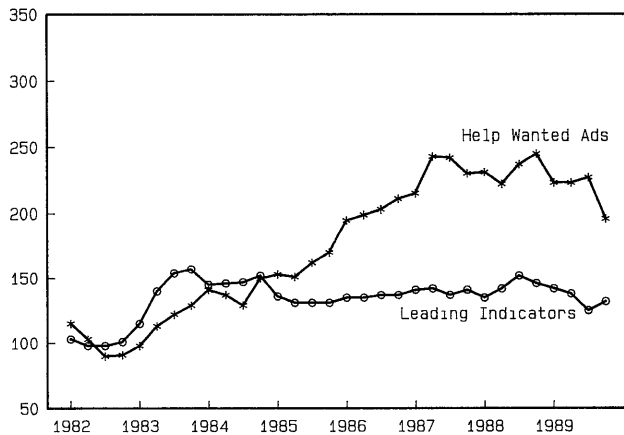
**Vacancy Rate:** The percentage of all housing units in existing homes or newly constructed units (visibly ready for occupancy) that are empty and therefore unoccupied. Vacancy rates in Michigan MSAs are determined by U.S. Postal Service delivery workers as part of an annual survey conducted for the Federal Home Loan Bank of Indianapolis. See Table A-5.

# The BUSINESS OUTLOOK for the BATTLE CREEK MSA

Total employment rose just 0.1 percent in the final quarter of 1989 in the Battle Creek MSA, in large part because of the now-settled strike at Post Cereal. The outlook for the area is mixed: employment growth in nonmanufacturing may wane; however, employment in manufacturing will rebound in the next quarter, primarily due to workers at Post going back to work.

Employment in manufacturing fell 3.4 percent in the fourth quarter of 1989, due to the strike at Post Cereal, a division of Kraft General Foods. The strike ended on December 14 when the workers ratified a new 35-month contract by a 7 to 1 margin. Employment in the area's other manufacturing industries remained stable in the quarter. In the third quarter, employment in manufacturing had dropped 1.6 percent.

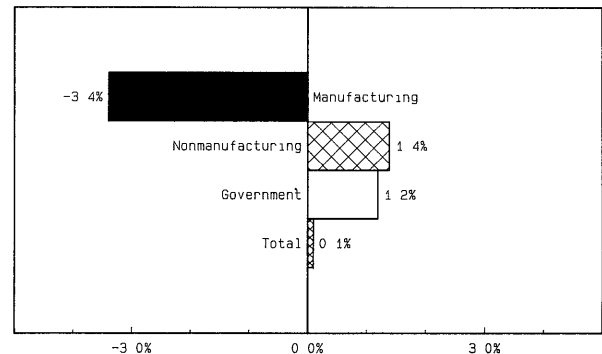
**Chart BC-1**  
**Battle Creek Indexes**  
**by Quarter - First of 1982 to Fourth of 1989**  
(1982=100)



The 39-day strike, the second longest in Post history, centered not on wages but on a proposed increase in employee contribution to the company's health plan. The plant produces approximately 85 percent of the company's cereal line.

Employment in nonmanufacturing grew a healthy 1.4 percent in the fourth quarter, improving its third quarter pace of 0.8 percent. Finally, employment in government rose 1.2 percent in the fourth quarter, partially offsetting its 2.6 percent plunge in the previous quarter.

**Chart BC-2**  
**Battle Creek Employment**  
**Percentage Change, Fourth Quarter 1989**



SOURCE: Based on Michigan Employment Security Commission data. Seasonally adjusted by the Institute.

The area's unemployment rate jumped up 0.8 percentage points to 8.4 percent in the fourth quarter. However, this increase should be discounted due to the strike.

The Index of Help-Wanted Advertising and the Index of Leading Indicators for the area moved in opposite directions in the fourth quarter. The Index of Help-Wanted Advertising plunged 13.7 percent, after rising for two straight quarters. The Index tracks the number of job openings available primarily in the area's nonmanufacturing sector. Although part of the decline may be a result of uncertainty associated with the strike at Post, we foresee slower employment growth in nonmanufacturing in the coming months.

The area's Index of Leading Indicators, which foretells short-run future activities in the manufacturing and construction sectors, jumped up 5.6 percent in the fourth quarter, after falling four straight quarters. The increase in manufacturing employment in the first quarter of 1990 may be greater than can be explained by the ending of the Post strike alone.

The local components of the Index were mixed. The average weekly hours worked by production workers rose 0.2 percent, after falling 1.4 percent in the previous quarter. The number of initial claims for unemployment insurance rose just 0.6 percent, after increasing 11.2 percent in the third quarter. Finally, the number of new dwelling units put under

contract soared 82.7 percent in the fourth quarter, more than offsetting its 36.2 percent drop in the previous quarter.

The future growth in manufacturing employment in the area may be dampened, however, by Kellogg's recently

announced plans to trim its white-collar workforce, nationwide, by 5 percent. Blamed on a slow market and intense competition, the employment reduction will be carried out through attrition and some layoffs, but will not affect the area's production workers.

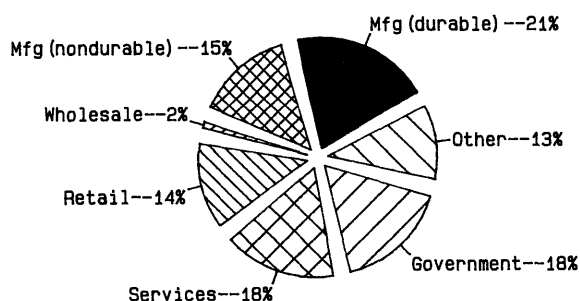
**Table BC-1**  
**Battle Creek (Calhoun County) Statistics**  
(Adjusted for seasonal variations)

Measure	1989 fourth quarter	1989 third quarter	Percent change third to fourth	1988 fourth quarter	Percent change fourth to fourth
<b>Employment:</b>					
Manufacturing .....	14,650	15,170	-3.4	15,530	-5.7
Nonmanufacturing .....	32,780	32,330	1.4	31,880	2.8
Government .....	11,850	11,710	1.2	11,710	1.2
Total .....	59,280	59,210	0.1	59,120	0.3
<b>Unemployment:</b>					
Number unemployed .....	5,660	5,010	13.0	4,250	33.2
Unemployment rate .....	8.4	7.6	0.8	6.6	1.8
<b>Local indexes:</b>					
Help-wanted ads .....	196	227	-13.7	253	-22.5
Leading indicators .....	132	125	5.6	146	-9.6
<b>Local components:</b>					
Average weekly hours ....	41.5	41.4	0.2	43.3	-4.2
UI initial claims .....	347	345	0.6	261	33.0
New dwelling units <sup>a</sup> .....	324	177	82.7	222	45.6

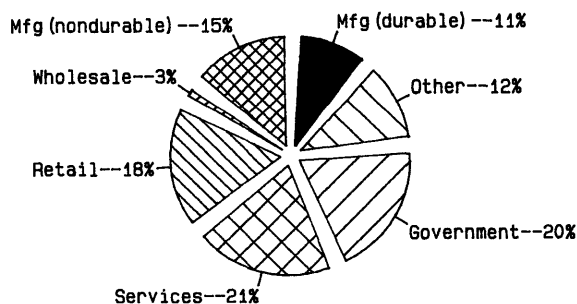
SOURCES: W.E. Upjohn Institute for Employment Research. Based on dwelling data from F.W. Dodge Division, McGraw Hill Information Systems Company, and count from *Battle Creek Enquirer* and employment data from Michigan Employment Security Commission. National components in Table A-3.

a. New dwelling unit data are seasonally adjusted annual rates.

### Battle Creek Wage and Salary Employment



1979 Annual Average



1989 Annual Average

Over the past 10 years, total wage and salary employment increased by 3 percent in the Battle Creek MSA. The share of employment in durable goods manufacturing dropped 10 percent, due to a 46 percent decline in the number of workers in durable goods production in the 10-year period. In 1989, durable goods manufacturing employed just 6,400 workers, down from 11,800 workers 10 years earlier. The gain in employment share of services and retail is attributed to their 22 percent and 36 percent increases in workers, respectively, during the 10-year period.

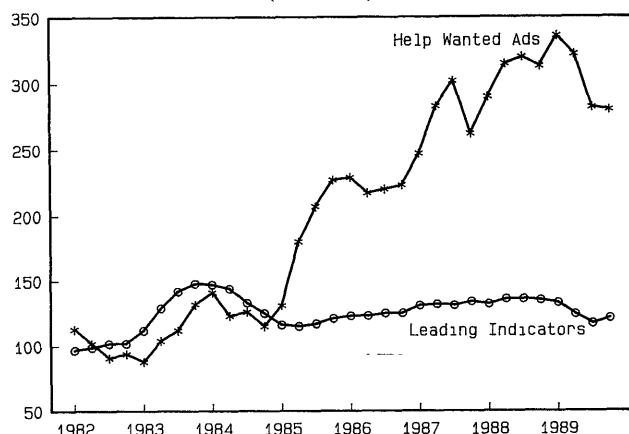
SOURCE: Michigan Employment Security Commission.

# The BUSINESS OUTLOOK for the BENTON HARBOR MSA

Total employment fell 0.4 percent in the final quarter of 1989 in the Benton Harbor MSA. Despite a 2.4 percent decline in manufacturing employment during the quarter, we foresee an improving employment picture in the area's manufacturing sector but a slowdown in rate of employment growth in the area's nonmanufacturing sector in the coming months.

Employment in manufacturing dropped 2.4 percent in the fourth quarter of 1989, on top of a 1.3 percent decline in the previous quarter. The drop in employment centered around the area's transportation equipment sector and is a result of the state's sagging auto industry. For example, Ausco (Auto Specialties Manufacturing Co.) laid off 25 workers in December, citing slow orders.

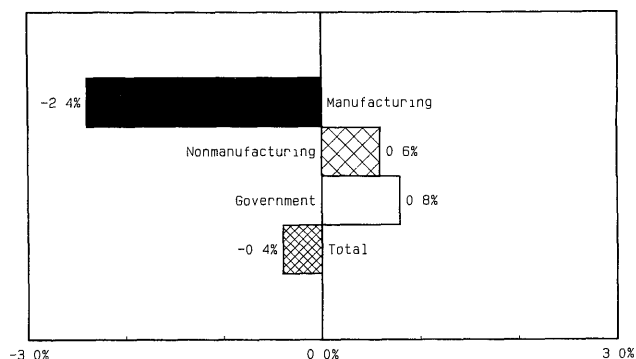
**Chart BH-1**  
**Benton Harbor Indexes**  
**by Quarter – First of 1982 to Fourth of 1989**  
(1982=100)



Employment in nonmanufacturing rose 0.6 percent in the fourth quarter, more than offsetting its 0.3 percent decline in the previous quarter. Finally, government employment increased 0.8 percent in the final quarter of 1989, after falling 0.3 percent in the third quarter.

In spite of its 0.4 percent decline in total employment, the area's unemployment rate inched downward by 0.1 percentage points to 7.8 percent in the fourth quarter. The number of individuals unemployed declined 0.5 percent in the quarter. These statistics suggest that a growing portion of the area's workforce may be commuting to other areas, such as the South Bend metropolitan area, for employment.

**Chart BH-2**  
**Benton Harbor Employment**  
**Percentage Change, Fourth Quarter 1989**



SOURCE: Based on Michigan Employment Security Commission data. Seasonally adjusted by the Institute.

The area's Index of Leading Indicators increased 3.4 percent in the fourth quarter. This is the first positive reading of the Index for over four quarters and indicates an improving employment picture in manufacturing, regardless of the troubled auto industry. The area's Index of Help-Wanted Advertising fell 0.7 percent in the fourth quarter. The Index has now declined for three straight quarters, suggesting little improvement in the nonmanufacturing sector in the coming months.

These conclusions are shared by a recent survey released by Manpower Inc. which reported that 23 percent of the employers polled said they will hire more workers in the first quarter of 1990, while 7 percent expected to cut their employment levels. Moreover, the report found that employment in nondurable manufacturing should rise while employment in the area's retail and wholesale sectors may wane.

All three local components of the area's Index of Leading Indicators improved in the fourth quarter. Average weekly hours of production workers rose 2.1 percent, after remaining unchanged in the previous quarter. The number of initial claims for unemployment insurance plunged 13.8 percent, partially offsetting its 26.2 percent jump in the third quarter. Finally, the number of new dwelling units put under contract increased 11.8 percent in the fourth quarter, nearly matching its 11.1 percent rise in the previous quarter.

Two of the area's major employers received bad news in recent months. In December, the bond-rating company,



Standard and Poor's, issued a credit watch on Whirlpool because of concern over the company's financial status. In spite of Whirlpool's assurances that the watch is unwarranted, the company's bond credit rating may be negatively impacted. Second, Zenith Data Systems (ZDS) lost a half-billion

dollar defense contract after federal authorities upheld a protest filed by General Technology. The company claims that the loss will not seriously impact area employment, nor will it impact the sale of ZDS and all of Zenith Electronics Corporation to Groupe Bull, a French firm.

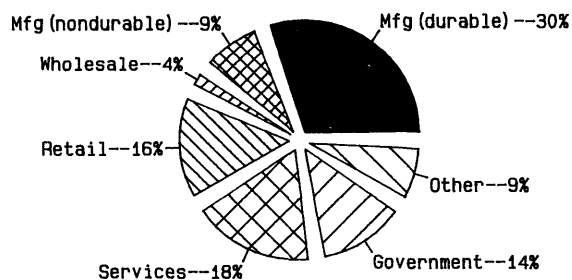
**Table BH-1**  
**Benton Harbor (Berrien County) Statistics**  
(Adjusted for seasonal variations)

Measure	1989 fourth quarter	1989 third quarter	Percent change third to fourth	1988 fourth quarter	Percent change fourth to fourth
Employment:					
Manufacturing .....	21,560	22,080	-2.4	21,590	-0.1
Nonmanufacturing .....	36,160	35,950	0.6	35,540	1.7
Government .....	8,790	8,720	0.8	8,730	0.7
Total .....	66,510	66,750	-0.4	64,840	2.6
Unemployment:					
Number unemployed .....	6,280	6,310	-0.5	5,470	14.8
Unemployment rate .....	7.8	7.9	-0.1	6.8	1.0
Local indexes:					
Help-wanted ads .....	280	282	-0.7	322	-13.0
Leading indicators .....	121	117	3.4	135	-10.4
Local components:					
Average weekly hours ....	42.8	41.9	2.1	42.4	0.9
UI initial claims .....	301	349	-13.8	236	27.5
New dwelling units <sup>a</sup> .....	423	379	11.8	396	7.0

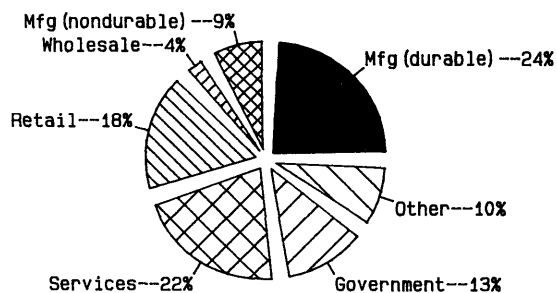
SOURCES: W. E. Upjohn Institute for Employment Research. Based on dwelling data from F.W. Dodge Division, McGraw Hill Information Systems Company, ad count from *Benton Harbor Herald Palladium* and employment data from Michigan Employment Security Commission. National components in Table A-3.

a. New dwelling unit data are seasonally adjusted annual rates.

### Benton Harbor Wage and Salary Employment



1979 Annual Average



1989 Annual Average

Over the past 10 years, total wage and salary employment increased by 4 percent in the Benton Harbor MSA. The share of employment in durable goods manufacturing declined by 6 percent, due to a 16 percent decrease in employment in the durable goods industries, from 19,400 workers in 1979 to 16,300 in 1989. The service sector increased its share of total employment from 18 percent to 22 percent, as its employment rose 24 percent.

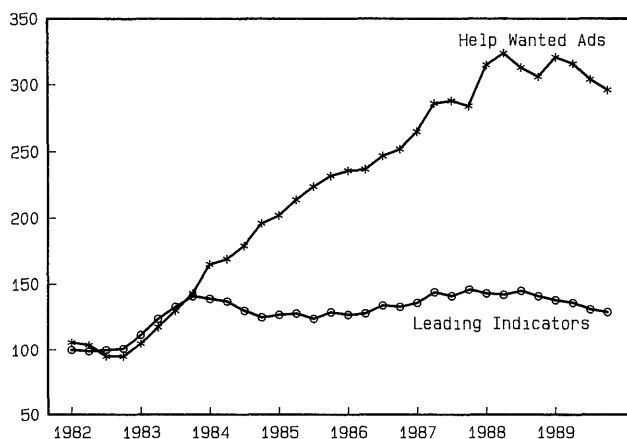
SOURCE: Michigan Employment Security Commission.

# The BUSINESS OUTLOOK for the GRAND RAPIDS MSA

Total employment grew a meager 0.3 percent in the Grand Rapids MSA (Kent and Ottawa Counties) in the final quarter of 1989. We foresee employment growth in the area's manufacturing and nonmanufacturing sectors being slow in the coming months.

Employment in manufacturing declined 0.3 percent in the fourth quarter of 1989, after increasing 0.4 percent in the previous quarter. Employment declines were reported primarily in the area's metal industries. In particular, the area's GM fabricated metals plants were forced to put more than 800 of their workers on temporary layoffs during December.

**Chart GR-1**  
**Grand Rapids Indexes**  
**by Quarter - First of 1982 to Fourth of 1989**

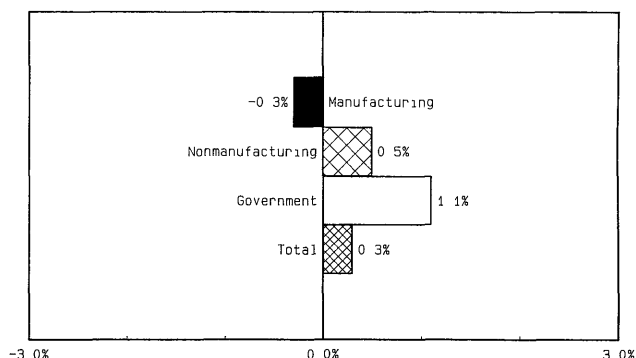


Layoffs were also reported at General Electric's Holland facility, which manufactures compressor motors. Moreover, company officials announced that the plant will close in 1990. Approximately 180 workers already have been laid off since September.

Employment in nonmanufacturing grew 0.5 percent in the fourth quarter, after increasing 1.4 percent in the previous quarter. Finally, government employment jumped 1.1 percent in the final quarter of 1989, more than erasing its 0.4 percent decline in the third quarter.

The area's unemployment rate inched up 0.2 percentage points to 5.6 percent in the fourth quarter as the number of individuals unemployed rose 6.5 percent.

**Chart GR-2**  
**Grand Rapids Employment**  
**Percentage Change, Fourth Quarter 1989**



SOURCE: Based on Michigan Employment Security Commission data. Seasonally adjusted by the Institute.

The short-term employment outlook calls for modest employment declines in manufacturing and meager employment growth in the area's nonmanufacturing sector. The area's Index of Leading Indicators, which tracks manufacturing activity, fell 1.5 percent and the area's Index of Help-Wanted Advertising, which identifies potential job openings in primarily nonmanufacturing, dropped 2.6 percent in the fourth quarter.

This outlook is supported by the recent surveys of purchasing managers in the Grand Rapids area by the Grand Rapids Association of Purchasing Management. In its January survey, the association reported that only 18 percent of the purchasing managers sampled experienced an increase in orders, compared to 59 percent that reported declines.

The local components of the area's Index of Leading Indicators were mixed. Average weekly hours of production workers fell 1.2 percent, on top of a 0.5 percent decline in the third quarter. The number of new dwelling units put under contract also fell 12.7 percent in the fourth quarter, wiping out its 6.6 percent rise posted in the third quarter. On the upside, the number of initial claims for unemployment insurance dropped 4.3 percent, after rising 10.5 percent in the previous period.

In downtown Grand Rapids, construction activity could explode if two major competing commercial towers are built.

Construction of the 730,000 square foot office tower, Bridgewater Place, on the west bank of the Grand River may start within 60 days. At the same time, a 250,000 square foot structure, Watermark Place, on the east bank is also being proposed. National studies have shown that new office

buildings draw most of their tenants from existing building in the area. Indeed, the developers of the two buildings are competing for a large local law firm. These projects are in addition to the Eastbank Waterfront Tower, which will contain a hotel, condominiums, and rental apartments.

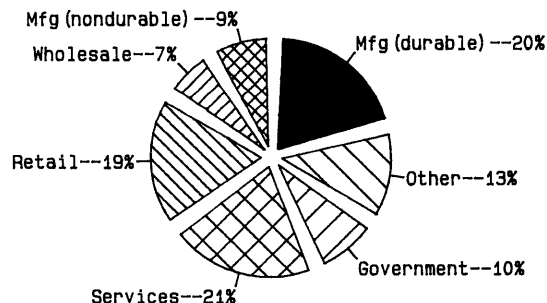
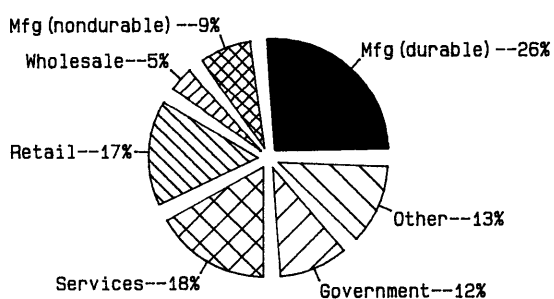
**Table GR-1**  
**Grand Rapids (Kent & Ottawa Counties) Statistics**  
(Adjusted for seasonal variations)

Measure	1989 fourth quarter	1989 third quarter	Percent change third to fourth	1988 fourth quarter	Percent change fourth to fourth
<b>Employment:</b>					
Manufacturing.....	100,030	100,300	-0.3	99,450	0.6
Nonmanufacturing .....	210,300	209,340	0.5	198,920	5.7
Government .....	32,890	32,540	1.1	32,780	0.3
Total .....	343,220	342,180	0.3	331,150	3.6
<b>Unemployment:</b>					
Number unemployed .....	21,360	20,050	6.5	19,110	11.8
Unemployment rate .....	5.6	5.4	0.2	5.2	0.4
<b>Local indexes:</b>					
Help-wanted ads .....	296	304	-2.6	304	-2.6
Leading indicators .....	129	131	-1.5	140	-7.9
<b>Local components:</b>					
Average weekly hours ....	40.7	41.2	-1.2	41.4	1.7
UI initial claims .....	1,106	1,156	-4.3	982	12.6
New dwelling units <sup>a</sup> .....	5,000	5,727	-12.7	4,950	1.0

SOURCES: W. E. Upjohn Institute for Employment Research. Based on dwelling data from F.W. Dodge Division, McGraw Hill Information Systems Company, ad count from *Grand Rapids Press* and employment data from Michigan Employment Security Commission. National components in Table A-3.

a. New dwelling unit data are seasonally adjusted annual rates.

### Grand Rapids Wage and Salary Employment



Over the past 10 years, total wage and salary employment grew a strong 25 percent in the Grand Rapids MSA. The share of total employment in the durable goods manufacturing sector declined from 26 percent to 20 percent, although actual employment in durable goods manufacturing only declined by 3 percent. Retail and services both experienced high growth in employment, with employment increases in their sector of 43 percent and 48 percent, respectively.

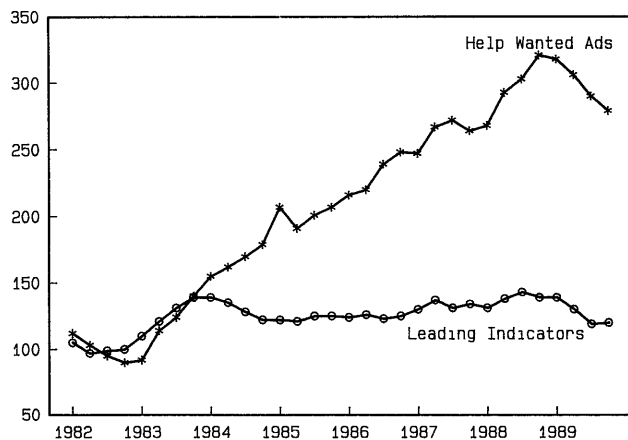
SOURCE: Michigan Employment Security Commission.

# The BUSINESS OUTLOOK for the KALAMAZOO MSA

*Total employment increased by 0.8 percent in the Kalamazoo MSA in the fourth quarter of 1989. We foresee, however, that employment growth will slow in the area's non-manufacturing sector and remain flat in its manufacturing sector in the coming months.*

Employment in manufacturing declined 0.7 percent in the fourth quarter of 1989, on top of a 0.5 percent drop in the previous quarter. The fourth quarter drop in employment can be attributed, almost solely, to the shutdown of Performance Paper in November, which eliminated 370 jobs.

**Chart K-1**  
**Kalamazoo Indexes**  
**by Quarter – First of 1982 to Fourth of 1989**



Employment in nonmanufacturing rose a healthy 1.0 percent in the fourth quarter, nearly matching its 1.1 percent rise of the previous quarter. Finally, government employment soared 2.4 percent in the fourth quarter, more than erasing its third-quarter drop of 1.4 percent.

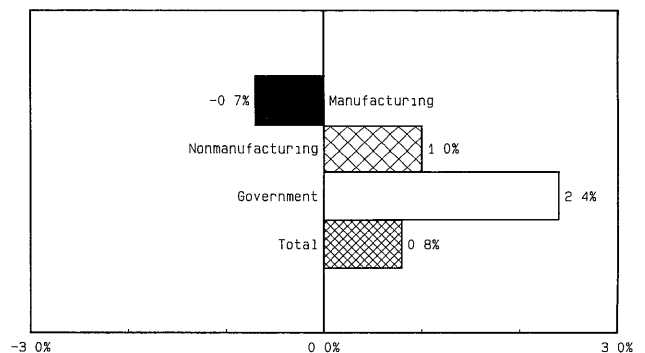
Despite the healthy 0.8 percent jump in employment, the area's unemployment rate inched up 0.1 percentage points to 5.1 percent in the fourth quarter. The area's unemployment rate remains the lowest in West Michigan and below that for the nation, however.

The area's Index of Help-Wanted Advertising, which tracks growth in employment opportunity in nonmanufacturing, dropped 3.8 percent in the final quarter of 1989. The area's Index of Leading Indicators, which focuses on the

area's goods-producing sectors, rose 0.8 percent in the quarter. As a result, we foresee slower employment growth in the area's nonmanufacturing sector and a bottoming out in employment decline in its manufacturing sector. Due to General Motors laying off 880 workers at its Comstock Township plant at the end of December, however, we may have to wait until February before a change in direction can be seen in manufacturing employment.

The local components of the area's Index of Leading Indicators were mixed in the fourth quarter. Average weekly hours of production workers fell a full 1.0 percent in the quarter, after dropping 0.7 percent in the third quarter. On the positive side, the number of initial claims for unemployment insurance declined 3.1 percent, partially offsetting its 10.3 percent jump recorded in the previous quarter. Finally, the number of new dwelling units put under contract rose 15.3 percent in the fourth quarter, after plunging 42.4 percent in the third quarter.

**Chart K-2**  
**Kalamazoo Employment**  
**Percentage Change, Fourth Quarter 1989**



SOURCE: Based on Michigan Employment Security Commission data. Seasonally adjusted by the Institute.

The City of Portage has decided to shorten the maximum duration of their abatements to only six years for structures and just three years for equipment. State law allows abatements to be granted for a full 12 years on both structures and equipment. For city officials, the need to insure future financial solvency was worth the risk of possibly making the city less competitive economically. It is too early to determine the economic impact of Portage's decision. Given that the tax abatement is but one of many variables that

businesses examine in determining a site location, its impact will most likely be small.

In the City of Kalamazoo, the Upjohn Company has purchased both the private and public portions of the struggling

Kalamazoo Center hotel complex. The Company will spend up to \$18 million on renovations. The Center is vital to both maintaining the city as a contender for regional convention trade and keeping a positive image of the city's downtown area.

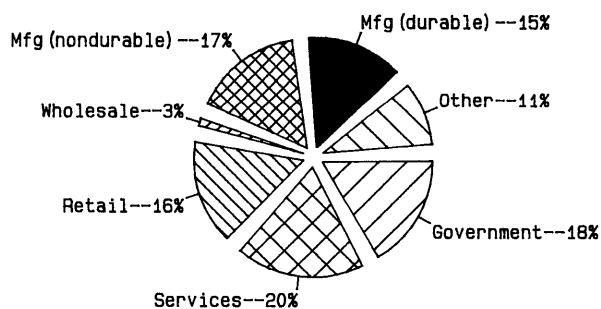
**Table K-1**  
**Kalamazoo (Kalamazoo County) Statistics**  
(Adjusted for seasonal variations)

Measure	1989 fourth quarter	1989 third quarter	Percent change third to fourth	1988 fourth quarter	Percent change fourth to fourth
<b>Employment:</b>					
Manufacturing .....	29,950	30,150	-0.7	30,390	-1.4
Nonmanufacturing .....	64,010	63,370	1.0	61,000	4.9
Government .....	17,720	17,310	2.4	17,360	2.1
Total .....	111,680	110,830	0.8	108,750	2.7
<b>Unemployment:</b>					
Number unemployed .....	6,260	6,020	4.0	5,560	12.6
Unemployment rate .....	5.1	5.0	0.1	4.7	0.4
<b>Local indexes:</b>					
Help-wanted ads .....	279	290	-3.8	322	-13.4
Leading indicators .....	120	119	0.8	139	-13.7
<b>Local components:</b>					
Average weekly hours ....	41.6	42.0	-1.0	42.8	-2.8
UI initial claims .....	370	382	-3.1	280	32.1
New dwelling units <sup>a</sup> .....	1,296	1,124	15.3	1,928	-32.8

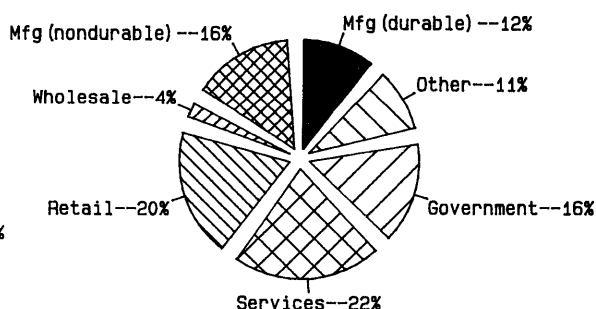
SOURCES: W. E. Upjohn Institute for Employment Research. Based on dwelling data from F.W. Dodge Division, McGraw Hill Information Systems Company, ad count from *Kalamazoo Gazette* and employment data from Michigan Employment Security Commission. National components in Table A-3.

a. New dwelling unit data are seasonally adjusted annual rates.

### Kalamazoo Wage and Salary Employment



1979 Annual Average



1989 Annual Average

Over the past 10 years, total wage and salary employment grew 14 percent in the Kalamazoo MSA. Durable goods manufacturing declined as a percentage of total employment from 15 percent to 12 percent, due to its 12 percent drop in employment. Meanwhile, employment in nondurable manufacturing rose 5.4 percent in the 10-year period. The retail and services sectors increased their shares of total wage and salary employment as a result of a 30 percent and 33 percent growth in employment, respectively.

SOURCE: Michigan Employment Security Commission.

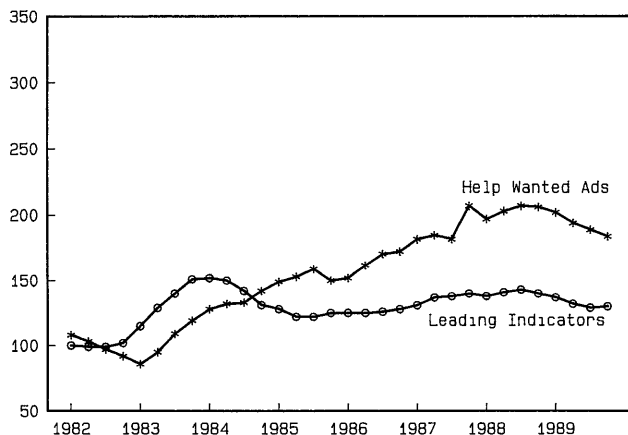


# The BUSINESS OUTLOOK for the MUSKEGON MSA

Total employment grew 0.4 percent in the Muskegon MSA in the fourth quarter of 1989. In the coming months, however, we expect employment growth in the area's nonmanufacturing sector to slow, while employment in manufacturing should hold steady.

Employment in manufacturing rose 0.4 percent in the fourth quarter of 1989, after falling 1.6 percent in the previous quarter. The turnaround is welcomed, as employment in manufacturing has dropped 5.3 percent over the past four quarters. This quarter's employment statistics do not include the 160 area workers who were laid off at the end of December by the former Shaw-Walker furniture company, a result of its being recently purchased by Westinghouse.

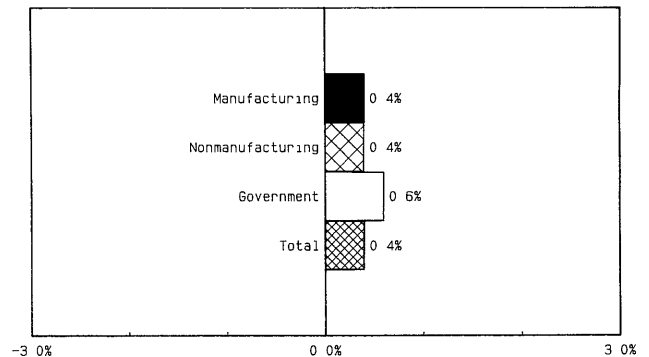
**Chart M-1**  
**Muskegon Indexes**  
**by Quarter - First of 1982 to Fourth of 1989**  
(1982=100)



Employment in nonmanufacturing also rose 0.4 percent in the fourth quarter, nearly matching its 0.5 percent increase in the previous quarter. Finally, government employment increased 0.6 percent in the quarter, on top of a 0.9 percent rise in the third quarter.

Due partially to the increase in employment during the quarter, the area's unemployment rate fell 0.4 percentage points to 9.1 percent. The number of individuals unemployed fell 3.5 percent.

**Chart M-2**  
**Muskegon Employment**  
**Percentage Change, Fourth Quarter 1989**



SOURCE: Based on Michigan Employment Security Commission data. Seasonally adjusted by the Institute.

In the fourth quarter, the area's Index of Help-Wanted Advertising fell for the fourth straight quarter, dropping 2.6 percent. The continuing decline in this Index, suggests slower growth in the area's nonmanufacturing sectors in the coming months.

The area's Index of Leading Indicators, on the other hand, rose 0.8 percent in the quarter. Although small, the rise in the Index is the first in five quarters and indicates a strengthening in the area's manufacturing sector.

The local components of the Index of Leading Indicators were mixed. Average weekly hours of production workers rose 0.5 percent, on top of a 1.2 percent increase in the previous quarter. The number of initial claims for unemployment insurance fell 4.5 percent, partially offsetting the 6.0 percent rise recorded in the third quarter. On the downside, the number of new dwelling units put under contract dropped 6.9 percent, after rising 21.0 percent in the previous quarter.

Teledyne Continental Motors has announced that it will close its Terrace Street plant, which is one of the last major manufacturing facilities on the lakefront in the downtown area. Approximately 60 workers will be laid off when the

plant closes sometime in early summer, down well below the 10,000 the plant formerly employed.

The closing of the plant opens up nearly 45 acres of waterfront property for commercial or recreational redevelopment. The closing of the Teledyne plant and the construction of

SPX headquarters on the old Lakey Foundry site, however, must not be taken as evidence that manufacturing no longer has a place in Muskegon. Manufacturing is a must for Muskegon, as it is for all of West Michigan, and can be a good neighbor to a growing commercial and recreational sector of the area's economy.

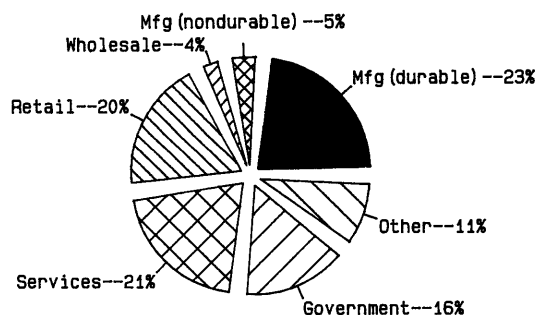
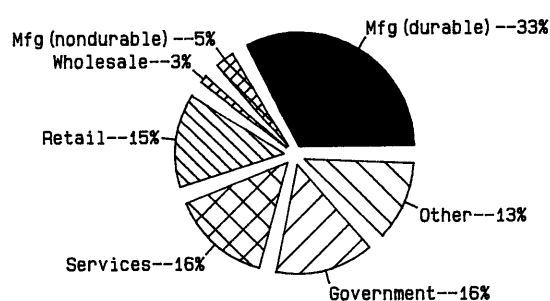
**Table M-1**  
**Muskegon (Muskegon County) Statistics**  
(Adjusted for seasonal variations)

Measure	1989 fourth quarter	1989 third quarter	Percent change third to fourth	1988 fourth quarter	Percent change fourth to fourth
<b>Employment:</b>					
Manufacturing .....	16,190	16,130	0.4	17,090	-5.3
Nonmanufacturing .....	32,430	32,310	0.4	31,350	3.4
Government .....	9,340	9,280	0.6	9,260	0.9
Total .....	57,960	57,720	0.4	57,700	0.5
<b>Unemployment:</b>					
Number unemployed .....	6,340	6,570	-3.5	6,140	3.3
Unemployment rate .....	9.1	9.5	-0.4	8.8	0.3
<b>Local indexes:</b>					
Help-wanted ads .....	184	189	-2.6	207	-11.1
Leading indicators .....	130	129	0.8	140	-7.1
<b>Local components:</b>					
Average weekly hours ....	41.7	41.5	0.5	41.1	1.5
UI initial claims .....	364	381	-4.5	318	14.5
New dwelling units <sup>a</sup> .....	576	619	-6.9	475	21.2

SOURCES: W. E. Upjohn Institute for Employment Research. Based on dwelling data from F.W. Dodge Division, McGraw Hill Information Systems Company, ad count from *Muskegon Chronicle* and employment data from Michigan Employment Security Commission. National components in Table A-3.

a. New dwelling unit data are seasonally adjusted annual rates.

### Muskegon Wage and Salary Employment



Over the past 10 years, total wage and salary employment remained constant in the Muskegon MSA. The share of total employment in durable manufacturing fell from 33 percent to 23 percent due to a 29 percent decline in employment in durable goods manufacturing. In 1989, 13,400 workers were employed in durable goods production, compared to 19,000 in 1979. Employment in nondurable manufacturing, however, rose a strong 11 percent in the 10 years. Both the services and retail sectors gained employment shares as a result of employment in the two industries increasing 30 percent and 33 percent, respectively.

SOURCE: Michigan Employment Security Commission.

**Table A-1**  
**Index of Help-Wanted Advertising (1982=100)**

Area	Annual averages (Selected years)						By quarter (Adjusted for seasonal variations)				
	1982	1985	1986	1987	1988	1989	1988 IV	I	1989 II	III	IV
Battle Creek MSA.....	100	159	202	233	234	217	244	220	223	227	196
Benton Harbor MSA.....	100	186	222	273	309	305	313	331	322	282	280
Grand Rapids MSA.....	100	218	243	281	314	309	306	317	316	304	296
Kalamazoo MSA.....	100	202	231	263	296	298	321	313	306	290	279
Muskegon MSA.....	100	152	165	189	203	192	206	199	194	189	184
West Michigan, 5 MSAs.....	100	198	225	260	260	283	295	293	286	279	269
Detroit, Michigan MSA.....	100	194	194	172	177	170	186	188	170	162	161
United States.....	100	160	161	196	216	208	214	213	217	202	200

SOURCES: West Michigan indexes based on ad counts from the *Battle Creek Enquirer*, *Benton Harbor Herald Palladium*, *Grand Rapids Press*, *Kalamazoo Gazette* and *Muskegon Chronicle*; United States and Detroit indexes derived from (1967=100) series of The Conference Board.

**Table A-2**  
**Index of Leading Indicators (1982=100)**  
**(Rounded)**

Area	Annual averages (Selected years)						By quarter (Adjusted for seasonal variations)				
	1982	1985	1986	1987	1988	1989	1988 IV	I	1989 II	III	IV
Battle Creek MSA.....	100	132	136	140	145	134	146	143	138	125	132
Benton Harbor MSA.....	100	117	124	133	135	124	135	132	124	117	121
Grand Rapids MSA.....	100	127	131	142	143	133	141	139	136	131	129
Kalamazoo MSA.....	100	123	124	133	138	127	139	138	130	119	120
Muskegon MSA.....	100	125	126	137	141	132	140	136	132	129	130
West Michigan, 5 MSAs... ..	100	131	134	145	148	138	148	147	142	133	133
Michigan.....	100	137	143	154	153	142	153	150	144	137	138

SOURCES: National index from U.S. Department of Commerce, all others from the W.E. Upjohn Institute.

### Technical Note

As presently constituted, the components and the range of weights used in the Indexes of Leading Indicators are as follows:

1. *Average weekly hours of production workers in manufacturing.* A separate series is used for each metropolitan area and for the State of Michigan. Weights range from .33 to .47.
2. *Initial claims for unemployment insurance (inverted).* A separate series is used for each metropolitan area and for the State of Michigan. Weights range from .08 to .12.
3. *New dwelling units put under contract (4-term trailing average).* A separate series is used for each metropolitan area and for the State of Michigan. Weights range from .03 to .11.

In addition, each area's index includes the following national measures:

4. *The proportion of firms reporting an increase in new orders.* Weights range from .09 to .12.
5. *The proportion of firms reporting an increase in purchased materials prices.* Weights range from .10 to .14.
6. *The proportion of firms reporting an increase in purchased material inventories.* Weights range from .08 to .14.
7. *The proportion of firms reporting a change in vendor performance (slower delivery time).* Weights range from .09 to .13.

**Table A-3**  
**Components of the Index of Leading Indicators**

<b>1. Average Weekly Hours of Production Workers</b>											
<b>Area</b>	<b>Annual averages (Selected years)</b>						<b>By quarter (Adjusted for seasonal variations)</b>				
	<b>1980</b>	<b>1985</b>	<b>1986</b>	<b>1987</b>	<b>1988</b>	<b>1989</b>	<b>1988 IV</b>	<b>I</b>	<b>1989 II</b>	<b>III</b>	<b>IV</b>
Battle Creek MSA.....	41.3	41.8	41.9	43.2	42.4	41.9	43.3	42.6	42.2	41.4	41.5
Benton Harbor MSA.....	39.9	39.7	41.0	40.7	42.1	42.4	42.6	43.1	41.9	41.9	42.8
Grand Rapids MSA.....	39.9	41.0	40.7	40.1	41.2	41.3	41.3	41.8	41.5	41.2	40.7
Kalamazoo MSA.....	40.4	43.1	42.9	42.7	42.1	42.1	42.6	42.6	42.3	42.0	41.6
Muskegon MSA.....	41.4	40.4	40.4	40.9	40.9	41.3	41.1	41.0	41.0	41.5	41.7
West Michigan, 5 MSAs.....	40.3	42.1	41.2	41.0	41.6	41.6	41.9	42.1	41.6	41.4	41.3
Michigan.....	40.1	43.1	42.6	42.2	43.2	43.1	43.8	43.7	43.3	42.8	42.5
United States.....	39.7	40.5	40.7	41.0	41.1	40.9	41.2	41.0	41.0	40.9	40.8

<b>2. Initial Claims for Unemployment Insurance (Average per week)</b>											
<b>Area</b>	<b>Annual averages (Selected years)</b>						<b>By quarter (Adjusted for seasonal variations)</b>				
	<b>1980</b>	<b>1985</b>	<b>1986</b>	<b>1987</b>	<b>1988</b>	<b>1989</b>	<b>1988 IV</b>	<b>I</b>	<b>1989 II</b>	<b>III</b>	<b>IV</b>
Battle Creek MSA.....	689	299	304	315	295	318	257	294	298	345	347
Benton Harbor MSA.....	366	237	259	235	252	289	237	236	272	349	301
Grand Rapids MSA.....	1,504	1,147	1,152	1,019	1,038	1,061	965	988	1,013	1,156	1,106
Kalamazoo MSA.....	599	308	329	336	292	339	272	290	327	382	370
Muskegon MSA.....	658	389	397	351	320	354	318	328	351	381	364
West Michigan, 5 MSAs.....	3,817	2,381	2,440	2,260	2,196	2,361	2,060	2,119	2,251	2,613	2,496
Michigan.....	37,942	15,624	17,765	17,067	17,053	17,276	15,165	15,592	16,137	19,138	18,748
United States.....	483,180	394,260	372,650	325,600	304,940	316,880	299,430	299,120	309,240	324,160	337,330

<b>3. New Dwelling Units - Put Under Contract</b>											
<b>Area</b>	<b>Annual averages (Selected years)</b>						<b>By quarter (Seasonally adjusted annual rate)</b>				
	<b>1980</b>	<b>1985</b>	<b>1986</b>	<b>1987</b>	<b>1988</b>	<b>1989</b>	<b>1988 IV</b>	<b>I</b>	<b>1989 II</b>	<b>III</b>	<b>IV</b>
Battle Creek MSA.....	219	223	257	181	226	264	214	298	271	177	324
Benton Harbor MSA.....	a	278	418	361	390	383	412	391	338	379	423
Grand Rapids MSA.....	3,121	4,569	4,963	5,575	5,448	5,214	5,019	4,934	5,279	5,727	5,000
Kalamazoo MSA.....	1,369	1,007	1,015	1,192	1,485	1,640	1,877	2,293	1,920	1,124	1,296
Muskegon MSA.....	500	410	393	416	446	531	487	435	501	619	576
West Michigan, 5 MSAs.....	a	6,487	7,046	7,756	8,028	8,002	7,799	8,421	8,256	8,052	7,589
Michigan.....	33,113	39,269	47,601	51,482	47,118	43,817	46,166	45,228	43,248	42,332	44,847

<b>4. National Purchasing Management Survey (Selected components indexed)<sup>b</sup></b>											
<b>Component</b>	<b>Annual averages (Selected years)</b>						<b>By quarter (Adjusted for seasonal variations)</b>				
	<b>1980</b>	<b>1985</b>	<b>1986</b>	<b>1987</b>	<b>1988</b>	<b>1989</b>	<b>1988 IV</b>	<b>I</b>	<b>1989 II</b>	<b>III</b>	<b>IV</b>
4. New orders.....	91	105	112	123	118	100	115	108	103	92	96
5. Change in inventories.....	83	88	89	97	99	91	99	96	92	90	87
6. Vendor performance.....	81	96	101	91	85	105	95	93	101	111	115
7. Changes in material prices..	147	91	103	143	154	106	141	134	114	90	86

SOURCES: Average weekly hours and initial claims based on information from Michigan Employment Security Commission; number of housing units put under contract, F.W. Dodge Division, McGraw Hill Information Systems Company; survey data from the National Association of Purchasing Management. Seasonal adjustment by the Institute.

a. Not available.

b. Survey results shown here are based on percent reporting conditions favorable to economic growth minus percent reporting conditions unfavorable to economic growth plus 100.

**Table A-4**  
**Employment Data for West Michigan MSAs and Michigan**  
(Thousands of jobs - by place of work)

<b>Total Employment<sup>a</sup></b>											
<b>Labor market area</b>	<b>Annual averages (Selected years)</b>						<b>By quarter (Adjusted for seasonal variations)</b>				
	<b>1980</b>	<b>1985</b>	<b>1986</b>	<b>1987</b>	<b>1988</b>	<b>1989</b>	<b>1988</b>	<b>1989</b>			
							<b>IV</b>	<b>I</b>	<b>II</b>	<b>III</b>	<b>IV</b>
Battle Creek MSA.....	55.2	54.2	55.0	56.1	58.2	59.3	59.2	59.2	59.5	59.2	59.3
Benton Harbor MSA.....	60.8	59.0	62.0	63.3	64.9	66.7	66.0	66.4	67.1	66.8	66.5
Grand Rapids MSA.....	266.1	293.4	300.3	306.0	324.1	340.0	331.5	335.4	339.2	342.2	343.2
Kalamazoo MSA.....	95.6	97.2	101.3	103.7	106.6	110.7	109.0	109.7	110.6	110.8	111.7
Muskegon MSA.....	56.4	55.2	56.2	56.0	57.0	57.8	57.8	57.5	57.8	57.7	58.0
West Michigan, 5 MSAs.....	534.1	559.1	574.7	585.1	610.6	634.5	623.3	628.7	633.9	636.6	638.6
Michigan.....	3,442.8	3,505.3	3,639.3	3,691.0	3,757.5	3,860.5	3,812.5	3,841.6	3,861.6	3,868.7	3,870.2
<b>Private Manufacturing Employment</b>											
<b>Labor market area</b>	<b>Annual averages (Selected years)</b>						<b>By quarter (Adjusted for seasonal variations)</b>				
	<b>1980</b>	<b>1985</b>	<b>1986</b>	<b>1987</b>	<b>1988</b>	<b>1989</b>	<b>1988</b>	<b>1989</b>			
							<b>IV</b>	<b>I</b>	<b>II</b>	<b>III</b>	<b>IV</b>
Battle Creek MSA.....	18.0	14.9	15.0	15.5	15.3	15.2	15.5	15.6	15.5	15.2	14.7
Benton Harbor MSA.....	21.5	20.5	21.5	21.3	21.2	22.1	21.6	22.3	22.4	22.1	21.6
Grand Rapids MSA.....	89.0	99.0	94.5	94.1	98.3	100.0	99.4	99.6	100.0	100.3	100.0
Kalamazoo MSA.....	28.5	29.1	29.2	29.1	30.1	30.2	30.4	30.4	30.3	30.2	30.0
Muskegon MSA.....	19.7	19.4	18.1	17.7	17.3	16.3	17.1	16.6	16.4	16.1	16.2
West Michigan, 5 MSAs.....	176.7	182.8	178.3	177.8	182.2	183.9	183.9	184.5	184.6	183.9	182.2
Michigan.....	998.9	984.3	998.2	966.4	934.2	943.1	944.4	950.8	949.3	944.0	927.2
<b>Private Nonmanufacturing Employment</b>											
<b>Labor market area</b>	<b>Annual averages (Selected years)</b>						<b>By quarter (Adjusted for seasonal variations)</b>				
	<b>1980</b>	<b>1985</b>	<b>1986</b>	<b>1987</b>	<b>1988</b>	<b>1989</b>	<b>1988</b>	<b>1989</b>			
							<b>IV</b>	<b>I</b>	<b>II</b>	<b>III</b>	<b>IV</b>
Battle Creek MSA.....	27.2	27.9	28.6	29.1	31.3	32.2	32.0	31.7	32.0	32.3	32.8
Benton Harbor MSA.....	30.4	30.5	32.1	33.5	35.0	35.9	35.6	35.4	36.0	36.0	36.2
Grand Rapids MSA.....	144.5	165.0	175.2	180.7	193.3	207.4	199.2	203.4	206.5	209.3	210.3
Kalamazoo MSA.....	50.3	52.6	56.1	58.0	59.1	63.0	61.1	61.8	62.7	63.4	64.0
Muskegon MSA.....	27.3	28.3	29.3	29.7	30.5	32.2	31.4	31.7	32.2	32.3	32.4
West Michigan, 5 MSAs.....	279.7	304.2	321.3	330.8	349.2	370.6	359.1	364.5	369.3	373.1	375.7
Michigan.....	1,816.1	1,941.3	2,044.5	2,114.0	2,192.7	2,286.1	2,233.7	2,260.0	2,280.3	2,296.3	2,306.8
<b>Government Employment</b>											
<b>Labor market area</b>	<b>Annual averages (Selected years)</b>						<b>By quarter (Adjusted for seasonal variations)</b>				
	<b>1980</b>	<b>1985</b>	<b>1986</b>	<b>1987</b>	<b>1988</b>	<b>1989</b>	<b>1988</b>	<b>1989</b>			
							<b>IV</b>	<b>I</b>	<b>II</b>	<b>III</b>	<b>IV</b>
Battle Creek MSA.....	10.1	11.5	11.4	11.5	11.5	11.9	11.7	11.9	12.0	11.7	11.9
Benton Harbor MSA.....	9.0	8.1	8.5	8.5	8.6	8.7	8.8	8.7	8.8	8.7	8.8
Grand Rapids MSA.....	32.3	29.4	30.6	31.1	31.7	32.7	32.9	32.4	32.7	32.5	32.9
Kalamazoo MSA.....	16.8	15.6	16.0	16.5	17.3	17.5	17.5	17.5	17.7	17.3	17.7
Muskegon MSA.....	9.4	7.6	8.7	8.8	9.1	9.2	9.3	9.2	9.2	9.3	9.3
West Michigan, 5 MSAs.....	77.6	72.1	75.1	76.3	78.2	80.1	80.3	79.7	80.2	79.6	80.7
Michigan.....	627.8	579.8	596.6	606.0	624.5	632.6	634.4	630.8	634.4	628.4	636.3

SOURCE: Michigan Employment Security Commission. Seasonal adjustments by the Institute.

a. Detail may not add to totals because of rounding.

**Table A-5**  
**Vacancy Rates for Selected Metropolitan Statistical Areas (MSAs) in Michigan**

MSA	Total existing housing units					
	End date of survey	All types	Single family	Single family attached	Multi-family	Mobile home
Ann Arbor .....	03/30/89	3.4	1.3	4.2	6.1	4.3
Battle Creek .....	10/14/88	3.8	2.5	9.3	8.8	8.1
Benton Harbor .....	04/06/89	3.1	2.3	4.1	6.0	5.0
Detroit .....	12/01/88	2.5	1.6	3.9	5.3	1.6
Flint .....	03/16/89	3.4	2.7	4.6	6.3	4.4
Grand Rapids .....	03/25/89	2.6	1.5	3.9	6.0	1.9
Jackson .....	05/11/89	2.7	1.9	3.4	6.7	0.8
Kalamazoo .....	03/16/89	3.7	2.3	5.2	6.5	6.1
Lansing .....	10/27/88	2.9	2.3	3.7	4.3	2.8
Muskegon .....	06/01/89	2.6	2.0	15.9	3.9	1.1
Saginaw-Bay City-Midland .....	09/23/89	2.3	1.8	4.5	4.2	2.9

MSA	Existing housing units plus units under construction					
	End date of survey	All types	Single family	Single family attached	Multi-family	Mobile home
Ann Arbor .....	03/30/89	6.0	2.6	9.8	10.2	n.a.
Battle Creek .....	10/14/88	4.0	2.6	9.3	9.6	n.a.
Benton Harbor .....	04/06/89	3.4	2.7	4.1	6.3	n.a.
Detroit .....	12/01/88	3.2	2.1	5.7	6.8	n.a.
Flint .....	03/16/89	3.7	2.8	6.0	7.1	n.a.
Grand Rapids .....	03/25/89	3.4	2.0	5.2	7.9	n.a.
Jackson .....	05/11/89	3.1	2.0	11.0	6.7	n.a.
Kalamazoo .....	03/16/89	5.2	2.6	10.7	10.8	n.a.
Lansing .....	10/27/88	3.3	2.6	4.1	5.3	n.a.
Muskegon .....	06/01/89	2.9	2.3	17.0	3.9	n.a.
Saginaw-Bay City-Midland .....	09/23/89	2.5	2.0	5.1	4.3	n.a.

SOURCE: Federal Home Loan Bank of Indianapolis.

NOTE: Vacancy rates for United States are not strictly comparable. In 1989 vacancy rates published by U.S. Department of Commerce show rental housing vacancy rates for the fourth, first, second, and third quarters of 1988/89 at 7.3, 7.3, 7.3 and 7.3 percent. Homeowner housing vacancy rates for the same periods were 1.6, 1.5, 1.6 and 1.8 percent.

**Table A-6**  
**Population by Sex and Age**  
**Michigan and Five Metro Areas in West Michigan**

Area		Percent Distribution						
		Males	Females	0-14	15-19	20-34	35-64	Over 64
Michigan .....	1985	48.8	51.2	22.6	8.5	26.4	31.9	10.6
	1980	48.8	51.2	24.0	9.7	26.0	30.5	9.8
Metropolitan (MSAs):								
Battle Creek .....	1985	48.5	51.5	22.6	7.9	24.5	33.1	11.9
	1980	48.5	51.5	23.3	9.4	24.0	32.0	11.3
Benton Harbor .....	1985	47.9	52.1	23.4	8.3	23.7	32.6	12.0
	1980	48.3	51.7	24.8	9.6	23.7	31.0	10.9
Grand Rapids .....	1985	48.6	51.4	23.9	8.2	28.2	29.9	9.8
	1980	48.5	51.5	24.4	10.1	27.0	28.7	9.8
Kalamazoo .....	1985	48.8	51.2	21.2	8.9	31.0	29.9	9.0
	1980	48.4	51.6	21.6	10.5	30.6	28.4	8.9
Muskegon .....	1985	48.5	51.5	23.7	8.2	25.3	31.2	11.6
	1980	48.4	51.6	24.5	10.0	24.3	30.5	10.7

SOURCE: Michigan Department of Management and Budget, Office of Revenue and Tax Analysis.

**Table A-7**  
**Average Residential Contract Mortgage Rates in Michigan**

Year	Jan.	Feb.	March	April	May	June	July	August	Sept.	Oct.	Nov.	Dec.
1982.....	17.30	17.47	17.40	17.49	17.43	17.37	17.29	17.15	16.24	15.83	14.72	14.28
1983.....	13.94	13.71	13.54	12.96	12.90	12.81	13.12	13.48	14.31	14.28	14.17	14.16
1984.....	14.11	13.77	13.79	14.10	14.37	15.02	15.15	14.99	14.84	14.75	14.25	14.19
1985.....	14.05	13.77	13.88	13.84	13.73	12.94	12.72	12.80	12.66	12.69	12.58	12.13
1986.....	11.46	11.46	10.92	10.81	10.79	11.19	11.24	11.12	10.90	10.84	10.73	10.49
1987.....	10.25	9.97	9.92	10.06	11.04	11.36	11.01	10.83	11.18	11.50	11.20	11.10
1988.....	11.05	10.52	10.45	10.53	10.73	10.99	10.87	10.97	11.06	10.94	10.70	10.89
1989.....	11.30	11.14	11.35	11.68	11.48	10.92	10.56	10.42	10.62	10.50	10.35	10.29

SOURCE: Business Information Division, Federal Home Loan Bank of Indianapolis.

NOTE: The contract rate shown is for 75 percent loan-to-value ratio, 25-year maturity loans on new single family homes. Alternative plans that allow mortgage rates to be adjusted, varied, blended, or shared can be arranged at lower rates.

**Table A-8**  
**Consumer Price Index**

Consumer Price Index (CPI), U.S. City Average (1982-84=100)													
Year	Annual Avg.	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
CPI for All Urban Consumers (CPI-U)													
1980	82.4	77.8	78.9	80.1	81.0	81.8	82.7	82.7	83.3	84.0	84.8	85.5	86.3
1981	90.9	87.0	87.9	88.5	89.1	89.8	90.6	91.6	92.3	93.2	93.4	93.7	94.0
1982	96.5	94.3	94.6	94.5	94.9	95.8	97.0	97.5	97.7	97.9	98.2	98.0	97.6
1983	99.6	97.8	97.9	97.9	98.6	99.2	99.5	99.9	100.2	100.7	101.0	101.2	101.3
1984	103.9	101.9	102.4	102.6	103.1	103.4	103.7	104.1	104.5	105.0	105.3	105.3	105.3
1985	107.6	105.5	106.0	106.4	106.9	107.3	107.6	107.8	108.0	108.3	108.7	109.0	109.3
1986	109.6	109.6	109.3	108.8	108.6	108.9	109.5	109.5	109.7	110.2	110.3	110.4	110.5
1987	113.6	111.2	111.6	112.1	112.7	113.1	113.5	113.8	114.4	115.0	115.3	115.4	115.4
1988	118.3	115.7	116.0	116.5	117.1	117.5	118.0	118.5	119.0	119.8	120.2	120.3	120.5
1989	124.0	121.1	121.6	122.3	123.1	123.8	124.1	124.4	124.6	125.0	125.6	125.9	126.1
CPI for Urban Wage Earners and Clerical Workers (CPI-W)													
1980	82.9	78.3	79.4	80.5	81.4	82.3	83.2	83.3	83.8	84.6	85.3	86.1	86.9
1981	91.4	87.5	88.5	89.0	89.6	90.3	91.1	92.2	92.8	93.7	93.9	94.1	94.4
1982	96.9	94.7	95.0	94.8	95.2	96.2	97.4	98.0	98.2	98.3	98.6	98.4	98.0
1983	99.8	98.1	98.1	98.4	99.0	99.5	99.8	100.1	100.5	101.0	101.2	101.2	101.2
1984	103.3	101.6	101.8	101.8	102.1	102.5	102.8	103.2	104.2	104.8	104.8	104.7	104.8
1985	106.9	104.9	105.4	105.9	106.3	106.7	107.0	107.1	107.3	107.6	107.9	108.3	108.6
1986	108.6	108.9	108.5	107.9	107.6	107.9	108.4	108.4	108.6	109.1	109.1	109.2	109.3
1987	112.5	110.0	110.5	111.0	111.6	111.9	112.4	112.7	113.3	113.8	114.1	114.3	114.2
1988	117.0	114.5	114.7	115.1	115.7	116.2	116.7	117.2	117.7	118.5	118.9	119.0	119.2
1989	122.6	119.7	120.2	120.8	121.8	122.5	122.8	123.2	123.2	123.6	124.2	124.4	124.6

SOURCE: Bureau of Labor Statistics, U.S. Department of Labor.

NOTES: Monthly data are shown above unadjusted for seasonal variations. Unadjusted CPI data are used extensively for escalation purposes. Although the CPI is often called the "Cost-of-Living Index," it measures only price change, which is just one of several important factors affecting living costs. All CPI series are linked historically to the original CPI Index for Urban Wage Earners and Clerical Workers.

These series contain no revision but are reprinted for the convenience of the user.

PERCENT CHANGE: Movements of these indexes from one time period to another are usually expressed as percent changes rather than changes in index points. Index point changes are affected by the level of the index in relation to its base period while percent changes are not. Examples of computation follow:

$$100 \times \frac{108.6 \text{ (1986 annual avg.)} - 106.9 \text{ (1985 annual avg.)}}{106.9 \text{ (1985 annual avg.)}} = 1.6\% \text{ change 1985 to 1986, CPI-W.}$$

$$100 \times \frac{109.3 \text{ (1986 December)} - 108.6 \text{ (1985 December)}}{108.6 \text{ (1985 December)}} = 0.6\% \text{ change December 1985 to December 1986, CPI-W.}$$

$$100 \times \frac{110.0 \text{ (1987 January)} - 109.3 \text{ (1986 December)}}{109.3 \text{ (1986 December)}} = 0.6\% \text{ change December 1986 CPI-W to January 1987, CPI-W.}$$



**Table A-9**  
**Selected Labor Market Indicators**  
 (Not adjusted for seasonal variations)

Area	Average for manufacturing production workers <sup>a</sup> December 1989			Civilian labor force unemployment rate <sup>b</sup>	
	Weekly hours	Hourly earnings	Weekly earnings	September 1989	December 1989
United States . . . . .	41.3	\$10.67	\$440.7	5.1	5.1
Michigan . . . . .	42.9	13.70	587.7	7.5	7.2
West Michigan MSAs:					
Battle Creek . . . . .	42.6	13.88	591.3	7.6	8.0
Benton Harbor . . . . .	44.2	9.86	435.8	8.5	7.6
Grand Rapids . . . . .	41.5	11.78	488.9	5.2	5.9
Kalamazoo . . . . .	42.1	13.08	550.7	5.2	5.1
Muskegon . . . . .	43.5	12.55	545.9	10.4	9.1
Other MSAs:					
Ann Arbor . . . . .	44.9	14.26	540.3	4.9	4.3
Detroit . . . . .	43.7	14.76	645.0	7.9	7.0
Flint . . . . .	43.6	17.57	766.1	9.8	8.5
Jackson . . . . .	42.4	11.05	468.5	7.1	7.1
Lansing-E. Lansing . . . . .	39.2	15.13	593.1	6.0	5.7
Saginaw-Bay City-Midland . . . . .	42.0	15.43	648.1	7.2	7.0
Other Areas:					
Upper Peninsula . . . . .	40.3	10.40	419.1	6.6	8.8

SOURCES: U.S. Department of Labor and the Michigan Employment Security Commission (MESCC) (most recent benchmark).

a. Preliminary. Earnings include overtime and part-time wages.

b. Seasonally adjusted rate for U.S. was 5.3 percent in September and 5.3 percent in December 1989. Seasonally adjusted rate for Michigan was 8.1 percent in September and 7.2 percent in December 1989.

**Table A-10**  
**Commercial Banking Data**  
**Third Quarter 1989**  
 (In thousands of current dollars)

	Metropolitan (MSAs) <sup>a</sup>				
	Battle Creek	Benton Harbor	Grand Rapids	Kalamazoo	Muskegon
Total deposits . . . . .	\$173,612	\$1,131,489	\$6,247,667	\$2,005,818	\$862,685
Total transaction accounts <sup>b</sup> . . . . .	53,213	286,322	1,299,343	532,772	205,876
Nontransaction savings <sup>c</sup> . . . . .	59,365	253,616	1,395,538	578,153	248,074
Time deposits < \$100,000 . . . . .	51,264	455,077	2,307,419	675,308	341,552
Time deposits > \$100,000 <sup>d</sup> . . . . .	9,770	136,474	1,245,368	205,334	67,183
Total assets . . . . .	193,046	1,251,074	7,538,886	2,347,246	964,288
Total loans . . . . .	71,417	778,983	4,849,864	1,526,809	518,217
Agriculture . . . . .	452	12,744	49,540	27,003	1,312
Business . . . . .	16,926	174,722	1,626,432	338,265	115,428
Consumer . . . . .	7,215	158,238	987,056	350,006	114,419
Government . . . . .	1,038	16,987	144,085	90,533	17,545
Real estate . . . . .	45,088	413,929	2,006,522	691,584	264,647
Other <sup>e</sup> . . . . .	698	2,363	36,229	29,418	4,866

SOURCE: Federal Reserve Bank of Chicago.

a. Reported data includes deposits and assets in all branches of banks with home offices in the five metropolitan statistical areas (MSAs).

b. Total transaction accounts include demand deposits, automated teller accounts, and NOW accounts.

c. Nontransaction savings include money market depository accounts (MMDA) and IRAs.

d. This category includes both time certificates and open-time certificates over \$100,000.

e. Includes loans made to depository institutions, leases, and bankers acceptances, and unearned income.

**Table A-11**  
**Population and Income Update for Selected Areas**

Area	Population				Per Capita Income			
	1988 <sup>a</sup>	1980	Change	% change	1987	1979	% change current dollars	% change constant dollars
Michigan .....	9,240,000	9,262,078	(22,078)	-0.2	11,973	7,688	55.7	3.5
West Michigan.....	1,733,000	1,646,402	86,598	5.3	11,043	7,072	56.1	3.8
Metropolitan (MSAs)								
6-county total.....	1,350,200	1,284,480	65,720	5.1	11,366	7,240	57.0	4.4
Battle Creek MSA.....	139,200	141,557	(2,357)	-1.7	10,827	7,211	50.1	-0.2
Benton Harbor MSA.....	166,600	171,276	(4,676)	-2.7	10,455	6,728	55.4	3.3
Kalamazoo MSA.....	217,900	212,378	5,522	2.6	12,367	7,769	59.2	5.8
Grand Rapids MSA.....	665,200	601,680	63,520	10.6	11,771	7,437	58.3	5.2
Kent County.....	484,600	444,506	40,094	9.0	11,883	7,522	58.0	5.0
Ottawa County.....	180,600	157,174	23,426	14.9	11,471	7,198	59.4	6.0
Muskegon MSA.....	161,300	157,589	3,711	2.4	9,752	6,358	53.4	2.0
Nonmetropolitan								
7-county total.....	382,800	361,922	20,878	5.8	9,901	6,476	52.9	1.7
Allegan.....	90,200	81,555	8,645	10.6	10,440	6,744	54.8	2.9
Barry.....	49,600	45,781	3,819	8.3	10,708	6,965	53.7	2.2
Branch.....	40,700	40,188	512	1.3	9,502	6,449	47.3	-2.0
Cass.....	49,500	49,499	1	0.0	9,887	6,481	52.6	1.4
Oceana.....	23,400	22,002	1,398	6.4	8,433	5,627	49.9	-0.4
St. Joseph.....	60,000	56,083	3,917	7.0	9,887	6,473	52.7	1.6
Van Buren.....	69,400	66,814	2,586	3.9	9,377	6,108	53.5	2.1

SOURCES: State of Michigan Department of Management and Budget and U.S. Bureau of the Census, 1988 County Estimates.

NOTE: Battle Creek MSA is Calhoun County; Benton Harbor MSA is Berrien County; Kalamazoo MSA is Kalamazoo County; and Muskegon MSA is Muskegon County.

a. 1988 population figures are estimates.

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